SEQUENCE LISTING

<110> Patten, Phillip A. et al.

<120> Interferon-Alpha Polypeptides and Conjugates

<130> 0269us410

<150> US 10/714,817
<151> 2003-11-17

<150> US 60/502,560
<151> 2003-09-12

<150> US 60/427,612
<151> 2002-11-18

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Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Lys Asp
            20                  25                  30
Arg His Asp Phe Arg Phe Pro Gln Glu Glu Phe Asp Gly Asn His Phe
        35                  40                  45
Gln Lys Val Gln Ala Ile Phe Leu Phe Tyr Glu Met Met Gln Gln Thr
    50                  55                  60
Phe Asn Leu Phe Ser Thr Lys Asn Ser Ser Ala Ala Trp Asp Glu Thr
65                  70                  75                  80

Leu Leu Glu Lys Phe Tyr Ile Glu Leu Phe Gln Gln Met Asn Asp Leu
                85                  90                  95
Glu Ala Cys Val Met Gln Glu Val Gly Val Glu Glu Thr Pro Leu Met
            100                 105                 110
Asn Val Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr
        115                 120                 125
Leu Tyr Leu Thr Lys Lys Lys Tyr Ser Pro Cys Ser Trp Glu Val Val
    130                 135                 140
Arg Ala Glu Ile Met Arg Ser Phe Ser Phe Ser Thr Asn Leu Gln Lys
145                 150                 155                 160
Arg Leu Arg Arg Lys Glu
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<210> 2
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Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Lys Asp
            20   25   30
Arg His Asp Phe Arg Phe Pro Gln Glu Glu Phe Asp Gly Asn Gln Phe
        35   40   45
Gln Lys Val Gln Ala Ile Phe Leu Phe Tyr Glu Met Met Gln Gln Thr
    50   55   60
Phe Asn Leu Phe Ser Thr Lys Asn Ser Ser Ala Ala Trp Asp Glu Thr
65   70   75   80
Leu Leu Glu Lys Phe Tyr Ile Glu Leu Phe Gln Gln Met Asn Asp Leu
                85   90   95
Glu Ala Cys Val Met Gln Glu Val Gly Val Glu Glu Thr Pro Leu Met
            100   105   110
Asn Val Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr
        115   120   125
Leu Tyr Leu Thr Lys Lys Lys Tyr Ser Pro Cys Ser Trp Glu Val Val
    130   135   140
Arg Ala Glu Ile Met Arg Ser Phe Ser Phe Ser Thr Asn Leu Gln Lys
145   150   155   160
Arg Leu Arg Arg Lys Glu
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<210> 3
<211> 166
<212> PRT
<213> Artificial Sequence B9x14

<220>
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Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Lys Asp
            20   25   30
Arg His Asp Phe Arg Phe Pro Gln Glu Glu Phe Asp Gly Asn His Phe
        35   40   45
Gln Lys Val Gln Ala Ile Phe Leu Phe Tyr Glu Met Met Gln Gln Thr
    50   55   60
Phe Asn Leu Phe Ser Thr Lys Asn Ser Ser Ala Ala Trp Asp Glu Thr
65   70   75   80
Leu Leu Glu Lys Phe Tyr Ile Glu Leu Phe Gln Gln Met Asn Asp Leu
                85   90   95
Glu Ala Cys Val Met Gln Glu Val Gly Val Glu Glu Thr Pro Leu Met
            100   105   110
Asn Val Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr
        115   120   125
Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
    130   135   140
Arg Ala Glu Ile Met Arg Ser Phe Ser Phe Ser Thr Asn Leu Gln Lys
145   150   155   160
Arg Leu Arg Arg Lys Glu
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Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Lys Asp
            20   25   30
Arg His Asp Phe Arg Phe Pro Gln Glu Glu Phe Asp Gly Asn Gln Phe
        35   40   45
Gln Lys Thr Gln Ala Ile Ser Val Phe His Glu Met Met Gln Gln Thr
    50   55   60
Phe Asn Leu Phe Ser Thr Lys Asn Ser Ser Ala Ala Trp Asp Glu Thr
65   70   75   80
Leu Leu Glu Lys Phe Tyr Ile Glu Leu Phe Gln Gln Met Asn Asp Leu
                85   90   95
Glu Ala Cys Val Met Gln Glu Val Gly Val Glu Glu Thr Pro Leu Met
            100   105   110
Asn Val Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr
        115   120   125
Leu Tyr Leu Thr Lys Lys Lys Tyr Ser Pro Cys Ser Trp Glu Val Val
    130   135   140
Arg Ala Glu Ile Met Arg Ser Phe Ser Phe Ser Thr Asn Leu Gln Lys
145   150   155   160
Arg Leu Arg Arg Lys Glu
                165

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<213> Artificial Sequence

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Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Lys Asp
            20   25   30
Arg His Asp Phe Arg Phe Pro Gln Glu Glu Phe Asp Gly Asn Gln Phe
        35   40   45
Gln Lys Val Gln Ala Ile Phe Leu Phe Tyr Glu Met Met Gln Gln Thr
    50   55   60
Phe Asn Leu Phe Ser Thr Lys Asn Ser Ser Ala Ala Trp Asp Glu Thr
65   70   75   80
Leu Leu Glu Lys Phe Tyr Ile Glu Leu Phe Gln Gln Met Asn Asp Leu
                85   90   95
Glu Ala Cys Val Met Gln Glu Val Gly Val Glu Glu Thr Pro Leu Met
            100   105   110
Asn Val Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr
        115   120   125
Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val

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    130                 135                 140
Arg Ala Glu Ile Met Arg Ser Phe Ser Phe Ser Thr Asn Leu Gln Lys
145                 150                 155                 160
Arg Leu Arg Arg Lys Glu
                165
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<212> PRT
<213> Artificial Sequence

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<223> IFNalpha B9x17

<400> 6

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 1                5                  10                  15
Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Lys Asp
            20                  25                  30
Arg His Asp Phe Arg Phe Pro Gln Glu Glu Phe Asp Gly Asn His Phe
        35                  40                  45
Gln Lys Thr Gln Ala Ile Ser Val Phe His Glu Met Met Gln Gln Thr
    50                  55                  60
Phe Asn Leu Phe Ser Thr Lys Asn Ser Ser Ala Ala Trp Asp Glu Thr
65                  70                  75                  80
Leu Leu Glu Lys Phe Tyr Ile Glu Leu Phe Gln Gln Met Asn Asp Leu
                85                  90                  95
Glu Ala Cys Val Met Gln Glu Val Gly Val Glu Glu Thr Pro Leu Met
            100                 105                 110
Asn Val Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr
        115                 120                 125
Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
    130                 135                 140
Arg Ala Glu Ile Met Arg Ser Phe Ser Phe Ser Thr Asn Leu Gln Lys
145                 150                 155                 160
Arg Leu Arg Arg Lys Glu
                165
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<210> 7
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<212> PRT
<213> Artificial Sequence

<220>
<223> IFNalpha B9x18

<400> 7

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Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Lys Asp
            20                  25                  30
Arg His Asp Phe Arg Phe Pro Gln Glu Glu Phe Asp Gly Asn Gln Phe
        35                  40                  45
Gln Lys Thr Gln Ala Ile Ser Val Phe His Glu Met Met Gln Gln Thr
    50                  55                  60
Phe Asn Leu Phe Ser Thr Lys Asn Ser Ser Ala Ala Trp Asp Glu Thr
65                  70                  75                  80
Leu Leu Glu Lys Phe Tyr Ile Glu Leu Phe Gln Gln Met Asn Asp Leu
                85                  90                  95
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Glu Ala Cys Val Met Gln Glu Val Gly Val Glu Glu Thr Pro Leu Met
            100                 105                 110
Asn Val Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr
        115                 120                 125
Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
    130                 135                 140
Arg Ala Glu Ile Met Arg Ser Phe Ser Phe Ser Thr Asn Leu Gln Lys
145                 150                 155                 160
Arg Leu Arg Arg Lys Glu
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<210> 8
<211> 166
<212> PRT
<213> Artificial Sequence

<220>
<223> IFNalpha B9x21

<400> 8

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Cys Asp Leu Pro Gln Thr His Ser Leu Ser Asn Arg Arg Thr Leu Met
 1               5                  10                  15
Leu Met Ala Gln Met Arg Arg Ile Ser Pro Phe Ser Cys Leu Lys Asp
            20                  25                  30
Arg His Asp Phe Gly Phe Pro Glu Glu Glu Phe Asp Gly His Gln Phe
        35                  40                  45
Gln Lys Thr Gln Ala Ile Ser Val Leu His Glu Leu Ile Gln Gln Thr
    50                  55                  60
Phe Asn Leu Phe Ser Thr Lys Asn Ser Ser Ala Ala Trp Asp Glu Thr
65                  70                  75                  80
Leu Leu Glu Lys Phe Tyr Ile Glu Leu Phe Gln Gln Met Asn Asn Leu
                85                  90                  95
Glu Ala Cys Val Ile Gln Glu Val Gly Val Glu Glu Ile Ala Leu Met
            100                 105                 110
Asn Val Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Arg Arg Ile Thr
        115                 120                 125
Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
    130                 135                 140
Arg Ala Glu Ile Met Arg Ser Phe Ser Phe Ser Thr Asn Leu Gln Lys
145                 150                 155                 160
Arg Leu Arg Arg Lys Glu
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<210> 9
<211> 166
<212> PRT
<213> Artificial Sequence

<220>
<223> IFNalpha B9x22

<400> 9

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 1               5                  10                  15
Leu Met Ala Gln Met Arg Arg Ile Ser Pro Phe Ser Cys Leu Lys Asp
            20                  25                  30
Arg His Asp Phe Gly Phe Pro Glu Glu Glu Phe Asp Gly His His Phe
        35                  40                  45
Gln Lys Thr Gln Ala Ile Ser Val Leu His Glu Leu Ile Gln Gln Thr
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    50                  55                  60
Phe Asn Leu Phe Ser Thr Lys Asn Ser Ser Ala Ala Trp Asp Glu Thr
65                  70                  75                  80
Leu Leu Glu Lys Phe Tyr Ile Glu Leu Phe Gln Gln Met Asn Asn Leu
                85                  90                  95
Glu Ala Cys Val Ile Gln Glu Val Gly Val Glu Glu Ile Ala Leu Met
            100                 105                 110
Asn Val Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Arg Arg Ile Thr
        115                 120                 125
Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
    130                 135                 140
Arg Ala Glu Ile Met Arg Ser Phe Ser Phe Ser Thr Asn Leu Gln Lys
145                 150                 155                 160
Arg Leu Arg Arg Lys Glu
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<211> 166
<212> PRT
<213> Artificial Sequence

<220>
<223> IFNalpha B9x23

<400> 10

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Leu Met Ala Gln Met Arg Arg Ile Ser Pro Phe Ser Cys Leu Lys Asp
            20                  25                  30
Arg His Asp Phe Gly Phe Pro Glu Glu Glu Phe Asp Gly His Gln Phe
        35                  40                  45
Gln Lys Val Gln Ala Ile Phe Leu Leu Tyr Glu Leu Ile Gln Gln Thr
    50                  55                  60
Phe Asn Leu Phe Ser Thr Lys Asn Ser Ser Ala Ala Trp Asp Glu Thr
65                  70                  75                  80
Leu Leu Glu Lys Phe Tyr Ile Glu Leu Phe Gln Gln Met Asn Asn Leu
                85                  90                  95
Glu Ala Cys Val Ile Gln Glu Val Gly Val Glu Glu Ile Ala Leu Met
            100                 105                 110
Asn Val Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Arg Arg Ile Thr
        115                 120                 125
Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
    130                 135                 140
Arg Ala Glu Ile Met Arg Ser Phe Ser Phe Ser Thr Asn Leu Gln Lys
145                 150                 155                 160
Arg Leu Arg Arg Lys Glu
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<210> 11
<211> 166
<212> PRT
<213> Artificial Sequence

<220>
<223> IFNalpha B9x24

<400> 11

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Cys Asp Leu Pro Gln Thr His Ser Leu Ser Asn Arg Arg Thr Leu Met
 1               5                  10                  15
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Leu Met Ala Gln Met Arg Arg Ile Ser Pro Phe Ser Cys Leu Lys Asp
            20                  25                  30
Arg His Asp Phe Gly Phe Pro Glu Glu Glu Phe Asp Gly His Gln Phe
        35                  40                  45
Gln Lys Thr Gln Ala Ile Ser Val Leu His Glu Leu Ile Gln Gln Thr
    50                  55                  60
Phe Asn Leu Phe Ser Thr Lys Asn Ser Ser Ala Ala Trp Asp Glu Thr
65                  70                  75                  80
Leu Leu Glu Lys Phe Tyr Ile Glu Leu Phe Gln Gln Met Asn Asn Leu
                85                  90                  95
Glu Ala Cys Val Ile Gln Glu Val Gly Val Glu Glu Ile Ala Leu Met
            100                 105                 110
Asn Val Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Arg Arg Ile Thr
        115                 120                 125
Leu Tyr Leu Thr Lys Lys Lys Tyr Ser Pro Cys Ser Trp Glu Val Val
    130                 135                 140
Arg Ala Glu Ile Met Arg Ser Phe Ser Phe Ser Thr Asn Leu Gln Lys
145                 150                 155                 160
Arg Leu Arg Arg Lys Glu
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<210> 12
<211> 166
<212> PRT
<213> Artificial Sequence

<220>
<223> IFNalpha B9x25

<400> 12

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 1               5                  10                  15
Leu Met Ala Gln Met Arg Arg Ile Ser Pro Phe Ser Cys Leu Lys Asp
            20                  25                  30
Arg His Asp Phe Gly Phe Pro Glu Glu Glu Phe Asp Gly His His Phe
        35                  40                  45
Gln Lys Val Gln Ala Ile Phe Leu Leu Tyr Glu Leu Ile Gln Gln Thr
    50                  55                  60
Phe Asn Leu Phe Ser Thr Lys Asn Ser Ser Ala Ala Trp Asp Glu Thr
65                  70                  75                  80
Leu Leu Glu Lys Phe Tyr Ile Glu Leu Phe Gln Gln Met Asn Asn Leu
                85                  90                  95
Glu Ala Cys Val Ile Gln Glu Val Gly Val Glu Glu Ile Ala Leu Met
            100                 105                 110
Asn Val Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Arg Arg Ile Thr
        115                 120                 125
Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
    130                 135                 140
Arg Ala Glu Ile Met Arg Ser Phe Ser Phe Ser Thr Asn Leu Gln Lys
145                 150                 155                 160
Arg Leu Arg Arg Lys Glu
                165
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<210> 13
<211> 166
<212> PRT
<213> Artificial Sequence

<220>

<223> IFNalpha B9x26

<400> 13

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 1               5                  10                  15
Leu Met Ala Gln Met Arg Arg Ile Ser Pro Phe Ser Cys Leu Lys Asp
            20                  25                  30
Arg His Asp Phe Gly Phe Pro Glu Glu Glu Phe Asp Gly His His Phe
        35                  40                  45
Gln Lys Thr Gln Ala Ile Ser Val Leu His Glu Leu Ile Gln Gln Thr
    50                  55                  60
Phe Asn Leu Phe Ser Thr Lys Asn Ser Ser Ala Ala Trp Asp Glu Thr
65                  70                  75                  80
Leu Leu Glu Lys Phe Tyr Ile Glu Leu Phe Gln Gln Met Asn Asn Leu
                85                  90                  95
Glu Ala Cys Val Ile Gln Glu Val Gly Val Glu Glu Ile Ala Leu Met
            100                 105                 110
Asn Val Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Arg Arg Ile Thr
        115                 120                 125
Leu Tyr Leu Thr Lys Lys Lys Tyr Ser Pro Cys Ser Trp Glu Val Val
    130                 135                 140
Arg Ala Glu Ile Met Arg Ser Phe Ser Phe Ser Thr Asn Leu Gln Lys
145                 150                 155                 160
Arg Leu Arg Arg Lys Glu
                165
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<210> 14
<211> 166
<212> PRT
<213> Artificial Sequence

<220>
<223> IFNalpha B9x27

<400> 14

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Leu Met Ala Gln Met Arg Arg Ile Ser Pro Phe Ser Cys Leu Lys Asp
            20                  25                  30
Arg His Asp Phe Gly Phe Pro Glu Glu Glu Phe Asp Gly His Gln Phe
        35                  40                  45
Gln Lys Val Gln Ala Ile Phe Leu Leu Tyr Glu Leu Ile Gln Gln Thr
    50                  55                  60
Phe Asn Leu Phe Ser Thr Lys Asn Ser Ser Ala Ala Trp Asp Glu Thr
65                  70                  75                  80
Leu Leu Glu Lys Phe Tyr Ile Glu Leu Phe Gln Gln Met Asn Asn Leu
                85                  90                  95
Glu Ala Cys Val Ile Gln Glu Val Gly Val Glu Glu Ile Ala Leu Met
            100                 105                 110
Asn Val Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Arg Arg Ile Thr
        115                 120                 125
Leu Tyr Leu Thr Lys Lys Lys Tyr Ser Pro Cys Ser Trp Glu Val Val
    130                 135                 140
Arg Ala Glu Ile Met Arg Ser Phe Ser Phe Ser Thr Asn Leu Gln Lys
145                 150                 155                 160
Arg Leu Arg Arg Lys Glu
                165
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<210> 15

<211> 166
<212> PRT
<213> Artificial Sequence

<220>
<223> IFNalpha B9x28

<400> 15
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 1   5   10   15
Leu Met Ala Gln Met Arg Arg Ile Ser Pro Phe Ser Cys Leu Lys Asp
            20   25   30
Arg His Asp Phe Gly Phe Pro Glu Glu Glu Phe Asp Gly His His Phe
        35   40   45
Gln Lys Val Gln Ala Ile Phe Leu Leu Tyr Glu Leu Ile Gln Gln Thr
    50   55   60
Phe Asn Leu Phe Ser Thr Lys Asn Ser Ser Ala Ala Trp Asp Glu Thr
65   70   75   80
Leu Leu Glu Lys Phe Tyr Ile Glu Leu Phe Gln Gln Met Asn Asn Leu
                85   90   95
Glu Ala Cys Val Ile Gln Glu Val Gly Val Glu Glu Ile Ala Leu Met
            100   105   110
Asn Val Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Arg Arg Ile Thr
        115   120   125
Leu Tyr Leu Thr Lys Lys Lys Tyr Ser Pro Cys Ser Trp Glu Val Val
    130   135   140
Arg Ala Glu Ile Met Arg Ser Phe Ser Phe Ser Thr Asn Leu Gln Lys
145   150   155   160
Arg Leu Arg Arg Lys Glu
                165

<210> 16
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<212> DNA
<213> Artificial Sequence

<220>
<223> IFNalpha B9x11 coding sequence

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gaggagtttg atggcaacca cttccagaag gttcaagcta tcttcctttt ctatgagatg 180
atgcagcaga ccttcaacct cttcagcaca aagaactcat ctgctgcttg ggatgagacc 240
ctcctagaaa aattctacat tgaacttttc cagcaaatga atgacctgga agcctgcgtg 300
atgcaggagg ttggagtgga agagactccc ctgatgaatg tggactccat cctggctgtg 360
aggaaatact ttcaaagaat cactctttat ctgacaaaga agaagtatag cccttgttcc 420
tgggaggttg tcagagcaga aatcatgaga tctttctctt tttcaacaaa cttgcaaaaa 480
agattaagga ggaaggaa   498

<210> 17
<211> 498
<212> DNA
<213> Artificial Sequence

<220>
<223> IFNalpha B9x12 coding sequence

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gaggagtttg atggcaacca gttccagaag gttcaagcta tcttcctttt ctatgagatg 180
atgcagcaga ccttcaacct cttcagcaca aagaactcat ctgctgcttg ggatgagacc 240
ctcctagaaa aattctacat tgaacttttc cagcaaatga atgacctgga agcctgcgtg 300
atgcaggagg ttggagtgga agagactccc ctgatgaatg tggactccat cctggctgtg 360
aggaaatact ttcaaagaat cactctttat ctgacaaaga agaagtatag cccttgttcc 420
tgggaggttg tcagagcaga aatcatgaga tctttctctt tttcaacaaa cttgcaaaaa 480
agattaagga ggaaggaa 498

<210> 18
<211> 498
<212> DNA
<213> Artificial Sequence

<220>
<223> IFNalpha B9x14 coding sequence

<400> 18
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gaggagtttg atggcaacca cttccagaag gttcaagcta tcttcctttt ctatgagatg 180
atgcagcaga ccttcaacct cttcagcaca aagaactcat ctgctgcttg ggatgagacc 240
ctcctagaaa aattctacat tgaacttttc cagcaaatga atgacctgga agcctgcgtg 300
atgcaggagg ttggagtgga agagactccc ctgatgaatg tggactccat cctggctgtg 360
aggaaatact ttcaaagaat cactctttat ctgacagaga agaagtatag cccttgtgcc 420
tgggaggttg tcagagcaga aatcatgaga tctttctctt tttcaacaaa cttgcaaaaa 480
agattaagga ggaaggaa 498

<210> 19
<211> 498
<212> DNA
<213> Artificial Sequence

<220>
<223> IFNalpha B9x15 coding sequence

<400> 19
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atgaggagaa tctctctttt ctcctgtctg aaggacagac atgacttcag atttccccag 120
gaggagtttg atggcaacca gttccagaag actcaagcta tctctgtctt ccatgagatg 180
atgcagcaga ccttcaacct cttcagcaca aagaactcat ctgctgcttg ggatgagacc 240
ctcctagaaa aattctacat tgaacttttc cagcaaatga atgacctgga agcctgcgtg 300
atgcaggagg ttggagtgga agagactccc ctgatgaatg tggactccat cctggctgtg 360
aggaaatact ttcaaagaat cactctttat ctgacaaaga agaagtatag cccttgttcc 420
tgggaggttg tcagagcaga aatcatgaga tctttctctt tttcaacaaa cttgcaaaaa 480
agattaagga ggaaggaa 498

<210> 20
<211> 498
<212> DNA
<213> Artificial Sequence

<220>
<223> IFNalpha B9x16 coding sequence

<400> 20
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atgaggagaa tctctctttt ctcctgtctg aaggacagac atgacttcag atttccccag 120
gaggagtttg atggcaacca gttccagaag gttcaagcta tcttcctttt ctatgagatg 180
atgcagcaga ccttcaacct cttcagcaca aagaactcat ctgctgcttg ggatgagacc 240
ctcctagaaa aattctacat tgaacttttc cagcaaatga atgacctgga agcctgcgtg 300

atgcaggagg ttggagtgga agagactccc ctgatgaatg tggactccat cctggctgtg 360
aggaaatact ttcaaagaat cactctttat ctgacagaga agaagtatag cccttgtgcc 420
tgggaggttg tcagagcaga aatcatgaga tctttctctt tttcaacaaa cttgcaaaaa 480
agattaagga ggaaggaa 498

<210> 21
<211> 498
<212> DNA
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<220>
<223> IFNalpha B9x17 coding sequence

<400> 21
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gaggagtttg atggcaacca cttccagaag actcaagcta tctctgtctt ccatgagatg 180
atgcagcaga ccttcaacct cttcagcaca aagaactcat ctgctgcttg ggatgagacc 240
ctcctagaaa aattctacat tgaacttttc cagcaaatga atgacctgga agcctgcgtg 300
atgcaggagg ttggagtgga agagactccc ctgatgaatg tggactccat cctggctgtg 360
aggaaatact ttcaaagaat cactctttat ctgacagaga agaagtatag cccttgtgcc 420
tgggaggttg tcagagcaga aatcatgaga tctttctctt tttcaacaaa cttgcaaaaa 480
agattaagga ggaaggaa 498

<210> 22
<211> 498
<212> DNA
<213> Artificial Sequence

<220>
<223> IFNalpha B9x18 coding sequence

<400> 22
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atgaggagaa tctctctttt ctcctgtctg aaggacagac atgacttcag atttccccag 120
gaggagtttg atggcaacca gttccagaag actcaagcta tctctgtctt ccatgagatg 180
atgcagcaga ccttcaacct cttcagcaca aagaactcat ctgctgcttg ggatgagacc 240
ctcctagaaa aattctacat tgaacttttc cagcaaatga atgacctgga agcctgcgtg 300
atgcaggagg ttggagtgga agagactccc ctgatgaatg tggactccat cctggctgtg 360
aggaaatact ttcaaagaat cactctttat ctgacagaga agaagtatag cccttgtgcc 420
tgggaggttg tcagagcaga aatcatgaga tctttctctt tttcaacaaa cttgcaaaaa 480
agattaagga ggaaggaa 498

<210> 23
<211> 498
<212> DNA
<213> Artificial Sequence

<220>
<223> IFNalpha B9x21 coding sequence

<400> 23
tgtgatctgc ctcagaccca cagcctgagt aacaggagga ctctgatgct catggcacaa 60
atgaggagaa tctctccttt ctcctgcctg aaggacagac atgatttcgg attccccgag 120
gaggagtttg atggccacca gttccagaag actcaagcca tctctgtcct ccatgagctg 180
atccagcaga ccttcaatct cttcagcaca aagaactcat ctgctgcttg ggatgagacc 240
ctcctagaaa aattctacat tgaacttttc cagcaaatga ataacctgga agcatgtgtg 300
atacaggagg ttggggtgga agagattgcc ctgatgaatg tggactccat cctggctgtg 360
aggaaatact tccgaagaat cactctctat ctgacagaga agaaatacag cccttgtgcc 420
tgggaggttg tcagagcaga aatcatgaga tctttctctt tttcaacaaa cttgcaaaaa 480
agattaagga ggaaggaa 498

<210> 24
<211> 498
<212> DNA
<213> Artificial Sequence

<220>
<223> IFNalpha B9x22 coding sequence

<400> 24
tgtgatctgc ctcagaccca cagcctgagt aacaggagga ctctgatgct catggcacaa 60
atgaggagaa tctctccttt ctcctgcctg aaggacagac atgatttcgg attccccgag 120
gaggagtttg atggccacca cttccagaag actcaagcca tctctgtcct ccatgagctg 180
atccagcaga ccttcaatct cttcagcaca aagaactcat ctgctgcttg ggatgagacc 240
ctcctagaaa aattctacat tgaacttttc cagcaaatga ataacctgga agcatgtgtg 300
atacaggagg ttggggtgga agagattgcc ctgatgaatg tggactccat cctggctgtg 360
aggaaatact tccgaagaat cactctctat ctgacagaga agaaatacag cccttgtgcc 420
tgggaggttg tcagagcaga aatcatgaga tctttctctt tttcaacaaa cttgcaaaaa 480
agattaagga ggaaggaa 498

<210> 25
<211> 498
<212> DNA
<213> Artificial Sequence

<220>
<223> IFNalpha B9x23 coding sequence

<400> 25
tgtgatctgc ctcagaccca cagcctgagt aacaggagga ctctgatgct catggcacaa 60
atgaggagaa tctctccttt ctcctgcctg aaggacagac atgatttcgg attccccgag 120
gaggagtttg atggccacca gttccagaag gttcaagcca tcttccttct ctatgagctg 180
atccagcaga ccttcaatct cttcagcaca aagaactcat ctgctgcttg ggatgagacc 240
ctcctagaaa aattctacat tgaacttttc cagcaaatga ataacctgga agcatgtgtg 300
atacaggagg ttggggtgga agagattgcc ctgatgaatg tggactccat cctggctgtg 360
aggaaatact tccgaagaat cactctctat ctgacagaga agaaatacag cccttgtgcc 420
tgggaggttg tcagagcaga aatcatgaga tctttctctt tttcaacaaa cttgcaaaaa 480
agattaagga ggaaggaa 498

<210> 26
<211> 498
<212> DNA
<213> Artificial Sequence

<220>
<223> IFNalpha B9x24 coding sequence

<400> 26
tgtgatctgc ctcagaccca cagcctgagt aacaggagga ctctgatgct catggcacaa 60
atgaggagaa tctctccttt ctcctgcctg aaggacagac atgatttcgg attccccgag 120
gaggagtttg atggccacca gttccagaag actcaagcca tctctgtcct ccatgagctg 180
atccagcaga ccttcaatct cttcagcaca aagaactcat ctgctgcttg ggatgagacc 240
ctcctagaaa aattctacat tgaacttttc cagcaaatga ataacctgga agcatgtgtg 300
atacaggagg ttggggtgga agagattgcc ctgatgaatg tggactccat cctggctgtg 360
aggaaatact tccgaagaat cactctctat ctgacaaaga agaaatacag cccttgttcc 420
tgggaggttg tcagagcaga aatcatgaga tctttctctt tttcaacaaa cttgcaaaaa 480
agattaagga ggaaggaa 498

<210> 27
<211> 498
<212> DNA

<213> Artificial Sequence

<220>
<223> IFNalpha B9x25 coding sequence

<400> 27
tgtgatctgc ctcagaccca cagcctgagt aacaggagga ctctgatgct catggcacaa 60
atgaggagaa tctctccttt ctcctgcctg aaggacagac atgatttcgg attccccgag 120
gaggagtttg atggccacca cttccagaag gttcaagcca tcttccttct ctatgagctg 180
atccagcaga ccttcaatct cttcagcaca aagaactcat ctgctgcttg ggatgagacc 240
ctcctagaaa aattctacat tgaacttttc cagcaaatga ataacctgga agcatgtgtg 300
atacaggagg ttggggtgga agagattgcc ctgatgaatg tggactccat cctggctgtg 360
aggaaatact tccgaagaat cactctctat ctgacagaga agaaatacag cccttgtgcc 420
tgggaggttg tcagagcaga aatcatgaga tctttctctt tttcaacaaa cttgcaaaaa 480
agattaagga ggaaggaa 498

<210> 28
<211> 498
<212> DNA
<213> Artificial Sequence

<220>
<223> IFNalpha B9x26 coding sequence

<400> 28
tgtgatctgc ctcagaccca cagcctgagt aacaggagga ctctgatgct catggcacaa 60
atgaggagaa tctctccttt ctcctgcctg aaggacagac atgatttcgg attccccgag 120
gaggagtttg atggccacca cttccagaag actcaagcca tctctgtcct ccatgagctg 180
atccagcaga ccttcaatct cttcagcaca aagaactcat ctgctgcttg ggatgagacc 240
ctcctagaaa aattctacat tgaacttttc cagcaaatga ataacctgga agcatgtgtg 300
atacaggagg ttggggtgga agagattgcc ctgatgaatg tggactccat cctggctgtg 360
aggaaatact tccgaagaat cactctctat ctgacaaaga agaaatacag cccttgttcc 420
tgggaggttg tcagagcaga aatcatgaga tctttctctt tttcaacaaa cttgcaaaaa 480
agattaagga ggaaggaa 498

<210> 29
<211> 498
<212> DNA
<213> Artificial Sequence

<220>
<223> IFNalpha B9x27 coding sequence

<400> 29
tgtgatctgc ctcagaccca cagcctgagt aacaggagga ctctgatgct catggcacaa 60
atgaggagaa tctctccttt ctcctgcctg aaggacagac atgatttcgg attccccgag 120
gaggagtttg atggccacca gttccagaag gttcaagcca tcttccttct ctatgagctg 180
atccagcaga ccttcaatct cttcagcaca aagaactcat ctgctgcttg ggatgagacc 240
ctcctagaaa aattctacat tgaacttttc cagcaaatga ataacctgga agcatgtgtg 300
atacaggagg ttggggtgga agagattgcc ctgatgaatg tggactccat cctggctgtg 360
aggaaatact tccgaagaat cactctctat ctgacaaaga agaaatacag cccttgttcc 420
tgggaggttg tcagagcaga aatcatgaga tctttctctt tttcaacaaa cttgcaaaaa 480
agattaagga ggaaggaa 498

<210> 30
<211> 498
<212> DNA
<213> Artificial Sequence

<220>
<223> IFNalpha B9x28 coding sequence

<400> 30
tgtgatctgc ctcagaccca cagcctgagt aacaggagga ctctgatgct catggcacaa 60
atgaggagaa tctctccttt ctcctgcctg aaggacagac atgatttcgg attccccgag 120
gaggagtttg atggccacca cttccagaag gttcaagcca tcttccttct ctatgagctg 180
atccagcaga ccttcaatct cttcagcaca aagaactcat ctgctgcttg ggatgagacc 240
ctcctagaaa aattctacat tgaacttttc cagcaaatga ataacctgga agcatgtgtg 300
atacaggagg ttggggtgga agagattgcc ctgatgaatg tggactccat cctggctgtg 360
aggaaatact tccgaagaat cactctctat ctgacaaaga agaaatacag cccttgttcc 420
tgggaggttg tcagagcaga aatcatgaga tctttctctt tttcaacaaa cttgcaaaaa 480
agattaagga ggaaggaa 498

<210> 31
<211> 166
<212> PRT
<213> Homo sapiens

<220>
<223> mature huIFN alpha-1a

<400> 31
Cys Asp Leu Pro Glu Thr His Ser Leu Asp Asn Arg Arg Thr Leu Met
 1   5   10   15
Leu Leu Ala Gln Met Ser Arg Ile Ser Pro Ser Ser Cys Leu Met Asp
            20   25   30
Arg His Asp Phe Gly Phe Pro Gln Glu Glu Phe Asp Gly Asn Gln Phe
        35   40   45
Gln Lys Ala Pro Ala Ile Ser Val Leu His Glu Leu Ile Gln Gln Ile
    50   55   60
Phe Asn Leu Phe Thr Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Asp
65   70   75   80
Leu Leu Asp Lys Phe Cys Thr Glu Leu Tyr Gln Gln Leu Asn Asp Leu
                85   90   95
Glu Ala Cys Val Met Gln Glu Glu Arg Val Gly Glu Thr Pro Leu Met
            100   105   110
Asn Ala Asp Ser Ile Leu Ala Val Lys Lys Tyr Phe Arg Arg Ile Thr
        115   120   125
Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
    130   135   140
Arg Ala Glu Ile Met Arg Ser Leu Ser Leu Ser Thr Asn Leu Gln Glu
145   150   155   160
Arg Leu Arg Arg Lys Glu
                165

<210> 32
<211> 165
<212> PRT
<213> Homo sapiens

<220>
<223> mature huIFN alpha-2b

<400> 32
Cys Asp Leu Pro Gln Thr His Ser Leu Gly Ser Arg Arg Thr Leu Met
 1   5   10   15
Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Lys Asp
            20   25   30
Arg His Asp Phe Gly Phe Pro Gln Glu Glu Phe Gly Asn Gln Phe Gln
        35   40   45
Lys Ala Glu Thr Ile Pro Val Leu His Glu Met Ile Gln Gln Ile Phe

```
    50                  55                  60
Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr Leu
65                  70                  75                  80
Leu Asp Lys Phe Tyr Thr Glu Leu Tyr Gln Gln Leu Asn Asp Leu Glu
                85                  90                  95
Ala Cys Val Ile Gln Gly Val Gly Val Thr Glu Thr Pro Leu Met Lys
            100                 105                 110
Glu Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr Leu
        115                 120                 125
Tyr Leu Lys Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val Arg
    130                 135                 140
Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Thr Asn Leu Gln Glu Ser
145                 150                 155                 160
Leu Arg Ser Lys Glu
                165
```

<210> 33
<211> 166
<212> PRT
<213> Homo sapiens

<220>
<223> mature huIFN alpha-4b

<400> 33

```
Cys Asp Leu Pro Gln Thr His Ser Leu Gly Asn Arg Arg Ala Leu Ile
 1               5                  10                  15
Leu Leu Ala Gln Met Gly Arg Ile Ser His Phe Ser Cys Leu Lys Asp
            20                  25                  30
Arg His Asp Phe Gly Phe Pro Glu Glu Glu Phe Asp Gly His Gln Phe
        35                  40                  45
Gln Lys Thr Gln Ala Ile Ser Val Leu His Glu Met Ile Gln Gln Thr
    50                  55                  60
Phe Asn Leu Phe Ser Thr Glu Asp Ser Ser Ala Ala Trp Glu Gln Ser
65                  70                  75                  80
Leu Leu Glu Lys Phe Ser Thr Glu Leu Tyr Gln Gln Leu Asn Asp Leu
                85                  90                  95
Glu Ala Cys Val Ile Gln Glu Val Gly Val Glu Glu Thr Pro Leu Met
            100                 105                 110
Asn Val Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr
        115                 120                 125
Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
    130                 135                 140
Arg Ala Glu Ile Met Arg Ser Leu Ser Phe Ser Thr Asn Leu Gln Lys
145                 150                 155                 160
Arg Leu Arg Arg Lys Asp
                165
```

<210> 34
<211> 166
<212> PRT
<213> Homo sapiens

<220>
<223> mature huIFN alpha-5

<400> 34

```
Cys Asp Leu Pro Gln Thr His Ser Leu Ser Asn Arg Arg Thr Leu Met
 1               5                  10                  15
```

```
Ile Met Ala Gln Met Gly Arg Ile Ser Pro Phe Ser Cys Leu Lys Asp
            20                  25                  30
Arg His Asp Phe Gly Phe Pro Gln Glu Glu Phe Asp Gly Asn Gln Phe
        35                  40                  45
Gln Lys Ala Gln Ala Ile Ser Val Leu His Glu Met Ile Gln Gln Thr
    50                  55                  60
Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Thr Trp Asp Glu Thr
65                  70                  75                  80
Leu Leu Asp Lys Phe Tyr Thr Glu Leu Tyr Gln Gln Leu Asn Asp Leu
                85                  90                  95
Glu Ala Cys Met Met Gln Glu Val Gly Val Glu Asp Thr Pro Leu Met
            100                 105                 110
Asn Val Asp Ser Ile Leu Thr Val Arg Lys Tyr Phe Gln Arg Ile Thr
        115                 120                 125
Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
    130                 135                 140
Arg Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Ala Asn Leu Gln Glu
145                 150                 155                 160
Arg Leu Arg Arg Lys Glu
                165
```

<210> 35
<211> 166
<212> PRT
<213> Homo sapiens

<220>
<223> mature huIFN alpha-6

<400> 35

```
Cys Asp Leu Pro Gln Thr His Ser Leu Gly His Arg Arg Thr Met Met
 1               5                  10                  15
Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Lys Asp
            20                  25                  30
Arg His Asp Phe Arg Phe Pro Gln Glu Glu Phe Asp Gly Asn Gln Phe
        35                  40                  45
Gln Lys Ala Glu Ala Ile Ser Val Leu His Glu Val Ile Gln Gln Thr
    50                  55                  60
Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Val Ala Trp Asp Glu Arg
65                  70                  75                  80
Leu Leu Asp Lys Leu Tyr Thr Glu Leu Tyr Gln Gln Leu Asn Asp Leu
                85                  90                  95
Glu Ala Cys Val Met Gln Glu Val Trp Val Gly Gly Thr Pro Leu Met
            100                 105                 110
Asn Glu Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr
        115                 120                 125
Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
    130                 135                 140
Arg Ala Glu Ile Met Arg Ser Phe Ser Ser Ser Arg Asn Leu Gln Glu
145                 150                 155                 160
Arg Leu Arg Arg Lys Glu
                165
```

<210> 36
<211> 166
<212> PRT
<213> Homo sapiens

<220>

<223> mature huIFN alpha-7a

<400> 36
Cys Asp Leu Pro Gln Thr His Ser Leu Arg Asn Arg Arg Ala Leu Ile
 1   5   10   15
Leu Leu Ala Gln Met Gly Arg Ile Ser Pro Phe Ser Cys Leu Lys Asp
            20   25   30
Arg His Glu Phe Arg Phe Pro Glu Glu Glu Phe Asp Gly His Gln Phe
        35   40   45
Gln Lys Thr Gln Ala Ile Ser Val Leu His Glu Met Ile Gln Gln Thr
    50   55   60
Phe Asn Leu Phe Ser Thr Glu Asp Ser Ser Ala Ala Trp Glu Gln Ser
65   70   75   80
Leu Leu Glu Lys Phe Ser Thr Glu Leu Tyr Gln Gln Leu Asn Asp Leu
                85   90   95
Glu Ala Cys Val Ile Gln Glu Val Gly Val Glu Glu Thr Pro Leu Met
            100   105   110
Asn Glu Asp Phe Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr
        115   120   125
Leu Tyr Leu Met Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
    130   135   140
Arg Ala Glu Ile Met Arg Ser Phe Ser Phe Ser Thr Asn Leu Lys Lys
145   150   155   160
Gly Leu Arg Arg Lys Asp
                165

<210> 37
<211> 166
<212> PRT
<213> Homo sapiens

<220>
<223> mature huIFN alpha-8b

<400> 37
Cys Asp Leu Pro Gln Thr His Ser Leu Gly Asn Arg Arg Ala Leu Ile
 1   5   10   15
Leu Leu Ala Gln Met Arg Arg Ile Ser Pro Phe Ser Cys Leu Lys Asp
            20   25   30
Arg His Asp Phe Glu Phe Pro Gln Glu Glu Phe Asp Asp Lys Gln Phe
        35   40   45
Gln Lys Ala Gln Ala Ile Ser Val Leu His Glu Met Ile Gln Gln Thr
    50   55   60
Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Leu Asp Glu Thr
65   70   75   80
Leu Leu Asp Glu Phe Tyr Ile Glu Leu Asp Gln Gln Leu Asn Asp Leu
                85   90   95
Glu Ser Cys Val Met Gln Glu Val Gly Val Ile Glu Ser Pro Leu Met
            100   105   110
Tyr Glu Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr
        115   120   125
Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Ser Cys Ala Trp Glu Val Val
    130   135   140
Arg Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Ile Asn Leu Gln Lys
145   150   155   160
Arg Leu Lys Ser Lys Glu
                165

<210> 38

<211> 166
<212> PRT
<213> Homo sapiens

<220>
<223> mature huIFN alpha-10a

<400> 38
Cys Asp Leu Pro Gln Thr His Ser Leu Gly Asn Arg Arg Ala Leu Ile
 1   5   10   15
Leu Leu Gly Gln Met Gly Arg Ile Ser Pro Phe Ser Cys Leu Lys Asp
            20   25   30
Arg His Asp Phe Arg Ile Pro Gln Glu Glu Phe Asp Gly Asn Gln Phe
        35   40   45
Gln Lys Ala Gln Ala Ile Ser Val Leu His Glu Met Ile Gln Gln Thr
    50   55   60
Phe Asn Leu Phe Ser Thr Glu Asp Ser Ser Ala Ala Trp Glu Gln Ser
65   70   75   80
Leu Leu Glu Lys Phe Ser Thr Glu Leu Tyr Gln Gln Leu Asn Asp Leu
                85   90   95
Glu Ala Cys Val Ile Gln Glu Val Gly Val Glu Glu Thr Pro Leu Met
            100   105   110
Asn Glu Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr
        115   120   125
Leu Tyr Leu Ile Glu Arg Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
    130   135   140
Arg Ala Glu Ile Met Arg Ser Leu Ser Phe Ser Thr Asn Leu Gln Lys
145   150   155   160
Arg Leu Arg Arg Lys Asp
                165

<210> 39
<211> 166
<212> PRT
<213> Homo sapiens

<220>
<223> mature huIFN alpha-14a

<400> 39
Cys Asn Leu Ser Gln Thr His Ser Leu Asn Asn Arg Arg Thr Leu Met
 1   5   10   15
Leu Met Ala Gln Met Arg Arg Ile Ser Pro Phe Ser Cys Leu Lys Asp
            20   25   30
Arg His Asp Phe Glu Phe Pro Gln Glu Glu Phe Asp Gly Asn Gln Phe
        35   40   45
Gln Lys Ala Gln Ala Ile Ser Val Leu His Glu Met Met Gln Gln Thr
    50   55   60
Phe Asn Leu Phe Ser Thr Lys Asn Ser Ser Ala Ala Trp Asp Glu Thr
65   70   75   80
Leu Leu Glu Lys Phe Tyr Ile Glu Leu Phe Gln Gln Met Asn Asp Leu
                85   90   95
Glu Ala Cys Val Ile Gln Glu Val Gly Val Glu Glu Thr Pro Leu Met
            100   105   110
Asn Glu Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr
        115   120   125
Leu Tyr Leu Met Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
    130   135   140
Arg Ala Glu Ile Met Arg Ser Phe Ser Phe Ser Thr Asn Leu Gln Lys
145   150   155   160

```
Arg Leu Arg Arg Lys Asp
                165


<210> 40
<211> 166
<212> PRT
<213> Homo sapiens

<220>
<223> mature huIFN alpha-16

<400> 40
Cys Asp Leu Pro Gln Thr His Ser Leu Gly Asn Arg Arg Ala Leu Ile
 1               5                  10                  15
Leu Leu Ala Gln Met Gly Arg Ile Ser His Phe Ser Cys Leu Lys Asp
            20                  25                  30
Arg Tyr Asp Phe Gly Phe Pro Gln Glu Val Phe Asp Gly Asn Gln Phe
        35                  40                  45
Gln Lys Ala Gln Ala Ile Ser Ala Phe His Glu Met Ile Gln Gln Thr
    50                  55                  60
Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr
65                  70                  75                  80
Leu Leu Asp Lys Phe Tyr Ile Glu Leu Phe Gln Gln Leu Asn Asp Leu
                85                  90                  95
Glu Ala Cys Val Thr Gln Glu Val Gly Val Glu Glu Ile Ala Leu Met
            100                 105                 110
Asn Glu Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr
        115                 120                 125
Leu Tyr Leu Met Gly Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
    130                 135                 140
Arg Ala Glu Ile Met Arg Ser Phe Ser Phe Ser Thr Asn Leu Gln Lys
145                 150                 155                 160
Gly Leu Arg Arg Lys Asp
                165


<210> 41
<211> 166
<212> PRT
<213> Homo sapiens

<220>
<223> mature huIFN alpha-17b

<400> 41
Cys Asp Leu Pro Gln Thr His Ser Leu Gly Asn Arg Arg Ala Leu Ile
 1               5                  10                  15
Leu Leu Ala Gln Met Gly Arg Ile Ser Pro Phe Ser Cys Leu Lys Asp
            20                  25                  30
Arg His Asp Phe Gly Leu Pro Gln Glu Glu Phe Asp Gly Asn Gln Phe
        35                  40                  45
Gln Lys Thr Gln Ala Ile Ser Val Leu His Glu Met Ile Gln Gln Thr
    50                  55                  60
Phe Asn Leu Phe Ser Thr Glu Asp Ser Ser Ala Ala Trp Glu Gln Ser
65                  70                  75                  80
Leu Leu Glu Lys Phe Ser Thr Glu Leu Tyr Gln Gln Leu Asn Asn Leu
                85                  90                  95
Glu Ala Cys Val Ile Gln Glu Val Gly Met Glu Glu Thr Pro Leu Met
            100                 105                 110
Asn Glu Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr
```

```
        115                 120                 125
Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
    130                 135                 140
Arg Ala Glu Ile Met Arg Ser Leu Ser Phe Ser Thr Asn Leu Gln Lys
145                 150                 155                 160
Ile Leu Arg Arg Lys Asp
                165
```

<210> 42
<211> 166
<212> PRT
<213> Homo sapiens

<220>
<223> mature huIFN alpha-21

<400> 42

```
Cys Asp Leu Pro Gln Thr His Ser Leu Gly Asn Arg Arg Ala Leu Ile
 1               5                  10                  15
Leu Leu Ala Gln Met Gly Arg Ile Ser Pro Phe Ser Cys Leu Lys Asp
            20                  25                  30
Arg His Asp Phe Gly Phe Pro Gln Glu Glu Phe Asp Gly Asn Gln Phe
        35                  40                  45
Gln Lys Ala Gln Ala Ile Ser Val Leu His Glu Met Ile Gln Gln Thr
    50                  55                  60
Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Thr Trp Glu Gln Ser
65                  70                  75                  80
Leu Leu Glu Lys Phe Ser Thr Glu Leu Asn Gln Gln Leu Asn Asp Leu
                85                  90                  95
Glu Ala Cys Val Ile Gln Glu Val Gly Val Glu Glu Thr Pro Leu Met
            100                 105                 110
Asn Val Asp Ser Ile Leu Ala Val Lys Lys Tyr Phe Gln Arg Ile Thr
        115                 120                 125
Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
    130                 135                 140
Arg Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Lys Ile Phe Gln Glu
145                 150                 155                 160
Arg Leu Arg Arg Lys Glu
                165
```

<210> 43
<211> 166
<212> PRT
<213> Artificial Sequence

<220>
<223> IFNalpha-Con1

<400> 43

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Cys Asp Leu Pro Gln Thr His Ser Leu Gly Asn Arg Arg Ala Leu Ile
 1               5                  10                  15
Leu Leu Ala Gln Met Arg Arg Ile Ser Pro Phe Ser Cys Leu Lys Asp
            20                  25                  30
Arg His Asp Phe Gly Phe Pro Gln Glu Glu Phe Asp Gly Asn Gln Phe
        35                  40                  45
Gln Lys Ala Gln Ala Ile Ser Val Leu His Glu Met Ile Gln Gln Thr
    50                  55                  60
Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Ser
65                  70                  75                  80
```

```
Leu Leu Glu Lys Phe Tyr Thr Glu Leu Tyr Gln Gln Leu Asn Asp Leu
                85                  90                  95
Glu Ala Cys Val Ile Gln Glu Val Gly Val Glu Glu Thr Pro Leu Met
            100                 105                 110
Asn Val Asp Ser Ile Leu Ala Val Lys Lys Tyr Phe Gln Arg Ile Thr
        115                 120                 125
Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
    130                 135                 140
Arg Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Thr Asn Leu Gln Glu
145                 150                 155                 160
Arg Leu Arg Arg Lys Glu
                165
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<210> 44
<211> 166
<212> PRT
<213> Artificial Sequence

<220>
<223> IFNalpha B9x14C2a

<400> 44

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Cys Asp Leu Pro Gln Thr His Ser Leu Gly His Arg Arg Thr Met Met
 1               5                  10                  15
Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Lys Asp
            20                  25                  30
Arg His Asp Phe Arg Phe Pro Gln Glu Glu Phe Asp Gly Asn His Phe
        35                  40                  45
Gln Lys Val Gln Ala Ile Phe Leu Phe Tyr Glu Met Met Gln Gln Thr
    50                  55                  60
Phe Asn Leu Phe Ser Thr Lys Asn Ser Ser Ala Ala Trp Asp Glu Thr
65                  70                  75                  80
Leu Leu Glu Lys Phe Tyr Ile Glu Leu Phe Gln Gln Met Asn Asp Leu
                85                  90                  95
Glu Ala Cys Val Met Gln Glu Val Gly Val Glu Glu Thr Pro Leu Met
            100                 105                 110
Asn Val Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr
        115                 120                 125
Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
    130                 135                 140
Arg Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Thr Asn Leu Gln Glu
145                 150                 155                 160
Ser Leu Arg Ser Lys Glu
                165
```

<210> 45
<211> 167
<212> PRT
<213> Artificial Sequence

<220>
<223> IFNalpha B9x14CHO1

<400> 45

```
Cys Asp Leu Pro Gln Thr His Ser Leu Gly His Arg Arg Thr Met Met
 1               5                  10                  15
Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Lys Asp
            20                  25                  30
Arg His Asp Phe Arg Phe Pro Gln Glu Glu Phe Asp Gly Asn His Phe
```

```
        35                  40                  45
Gln Lys Val Gln Ala Ile Phe Leu Phe Tyr Glu Met Met Gln Gln Thr
    50                  55                  60
Phe Asn Leu Phe Ser Thr Lys Asn Ser Ser Ala Ala Trp Asp Glu Thr
65                  70                  75                  80
Leu Leu Glu Lys Phe Tyr Ile Glu Leu Phe Gln Gln Met Asn Asp Leu
                85                  90                  95
Glu Ala Cys Val Met Gln Glu Val Gly Val Glu Glu Thr Pro Leu Met
            100                 105                 110
Asn Val Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr
        115                 120                 125
Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
    130                 135                 140
Arg Ala Glu Ile Met Arg Ser Phe Ser Phe Ser Thr Asn Leu Gln Lys
145                 150                 155                 160
Arg Leu Arg Arg Lys Glu Cys
                165
```

<210> 46
<211> 166
<212> PRT
<213> Artificial Sequence

<220>
<223> IFNalpha B9x14CHO3

<400> 46

```
Cys Asp Leu Pro Gln Thr His Ser Leu Gly His Arg Arg Thr Met Met
 1               5                  10                  15
Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Lys Asp
            20                  25                  30
Arg His Asp Phe Arg Phe Pro Gln Glu Glu Phe Asp Gly Asn His Phe
        35                  40                  45
Gln Lys Val Gln Ala Ile Phe Leu Phe Tyr Glu Met Met Gln Gln Thr
    50                  55                  60
Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr
65                  70                  75                  80
Leu Leu Glu Lys Phe Tyr Ile Glu Leu Phe Gln Gln Met Asn Asp Leu
                85                  90                  95
Glu Ala Cys Val Met Gln Glu Val Gly Val Glu Glu Thr Pro Leu Met
            100                 105                 110
Asn Val Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr
        115                 120                 125
Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
    130                 135                 140
Arg Ala Glu Ile Met Arg Ser Phe Ser Phe Ser Thr Asn Leu Gln Lys
145                 150                 155                 160
Arg Leu Arg Arg Lys Glu
                165
```

<210> 47
<211> 166
<212> PRT
<213> Artificial Sequence

<220>
<223> IFNalpha B9x14CHO4

<400> 47

```
Cys Asp Leu Pro Gln Thr His Ser Leu Gly His Arg Arg Thr Met Met
 1               5                  10                  15
Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Lys Asp
            20                  25                  30
Arg His Asp Phe Arg Phe Pro Gln Glu Glu Phe Asp Gly Asn His Phe
        35                  40                  45
Gln Lys Val Gln Ala Ile Phe Leu Phe Tyr Glu Met Met Gln Gln Thr
    50                  55                  60
Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr
65                  70                  75                  80
Leu Leu Glu Lys Phe Tyr Ile Glu Leu Phe Gln Gln Met Asn Asp Leu
                85                  90                  95
Glu Ala Cys Val Met Gln Glu Val Gly Val Glu Glu Thr Pro Leu Met
            100                 105                 110
Asn Val Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr
        115                 120                 125
Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
    130                 135                 140
Arg Ala Glu Ile Met Arg Ser Phe Ser Phe Ser Thr Asn Leu Gln Glu
145                 150                 155                 160
Ser Leu Arg Ser Lys Glu
                165
```

<210> 48
<211> 166
<212> PRT
<213> Artificial Sequence

<220>
<223> IFNalpha B9x14CHO5

<400> 48

```
Cys Asp Leu Pro Gln Thr His Ser Leu Gly His Arg Arg Thr Met Met
 1               5                  10                  15
Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Lys Asp
            20                  25                  30
Arg His Asp Phe Arg Phe Pro Gln Glu Glu Phe Asp Gly Asn His Phe
        35                  40                  45
Gln Lys Val Gln Ala Ile Phe Leu Phe Tyr Glu Met Met Gln Gln Thr
    50                  55                  60
Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr
65                  70                  75                  80
Leu Leu Glu Lys Phe Tyr Ile Glu Leu Phe Gln Gln Met Asn Asp Leu
                85                  90                  95
Glu Ala Cys Val Met Gln Glu Val Gly Val Glu Glu Thr Pro Leu Met
            100                 105                 110
Asn Val Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr
        115                 120                 125
Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
    130                 135                 140
Arg Ala Glu Ile Met Arg Ser Phe Ser Phe Ser Thr Asn Leu Gln Glu
145                 150                 155                 160
Cys Leu Arg Ser Lys Glu
                165
```

<210> 49
<211> 166
<212> PRT
<213> Artificial Sequence

<220>
<223> IFNalpha B9x14CHO6

<400> 49
Cys Asp Leu Pro Gln Thr His Ser Leu Gly His Arg Arg Thr Met Met
 1   5   10   15
Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Lys Asp
            20   25   30
Arg His Asp Phe Arg Phe Pro Gln Glu Glu Phe Asp Gly Asn His Phe
        35   40   45
Gln Lys Val Gln Ala Ile Phe Leu Phe Tyr Glu Met Met Gln Gln Thr
    50   55   60
Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr
65   70   75   80
Leu Leu Glu Lys Phe Tyr Ile Glu Leu Phe Gln Gln Met Asn Asp Leu
                85   90   95
Glu Ala Cys Val Met Gln Glu Val Gly Val Glu Glu Thr Pro Leu Met
            100   105   110
Asn Val Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr
        115   120   125
Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
    130   135   140
Arg Ala Glu Ile Met Arg Ser Phe Ser Phe Ser Thr Asn Leu Gln Glu
145   150   155   160
Ser Leu Arg Cys Lys Glu
                165

<210> 50
<211> 166
<212> PRT
<213> Artificial Sequence

<220>
<223> IFNalpha 14Ep01

<400> 50
Cys Asp Leu Pro Gln Thr His Ser Leu Gly His Arg Arg Thr Met Met
 1   5   10   15
Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Lys Asp
            20   25   30
Arg His Asp Phe Arg Phe Pro Gln Glu Glu Phe Asp Gly Asn Gln Phe
        35   40   45
Gln Lys Ala Gln Ala Ile Ser Val Leu His Glu Met Met Gln Gln Thr
    50   55   60
Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr
65   70   75   80
Leu Leu Glu Lys Phe Tyr Ile Glu Leu Phe Gln Gln Met Asn Asp Leu
                85   90   95
Glu Ala Cys Val Met Gln Glu Val Gly Val Glu Glu Thr Pro Leu Met
            100   105   110
Asn Val Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr
        115   120   125
Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
    130   135   140
Arg Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Thr Asn Leu Gln Glu
145   150   155   160
Ser Leu Arg Ser Lys Glu
                165

<210> 51
<211> 166
<212> PRT
<213> Artificial Sequence

<220>
<223> IFNalpha 14Ep02

<400> 51
Cys Asp Leu Pro Gln Thr His Ser Leu Gly His Arg Arg Thr Met Met
 1   5   10   15
Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Lys Asp
            20   25   30
Arg His Asp Phe Arg Phe Pro Gln Glu Glu Phe Asp Gly Asn His Phe
        35   40   45
Gln Lys Val Gln Ala Ile Phe Leu Phe Tyr Glu Met Ile Gln Gln Thr
    50   55   60
Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr
65   70   75   80
Leu Leu Asp Lys Phe Tyr Ile Glu Leu Phe Gln Gln Leu Asn Asp Leu
                85   90   95
Glu Ala Cys Val Thr Gln Glu Val Gly Val Glu Glu Ile Ala Leu Met
            100   105   110
Asn Glu Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr
        115   120   125
Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
    130   135   140
Arg Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Thr Asn Leu Gln Glu
145   150   155   160
Ser Leu Arg Ser Lys Glu
                165

<210> 52
<211> 166
<212> PRT
<213> Artificial Sequence

<220>
<223> IFNalpha 14Ep03

<400> 52
Cys Asp Leu Pro Gln Thr His Ser Leu Gly His Arg Arg Thr Met Met
 1   5   10   15
Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Lys Asp
            20   25   30
Arg His Asp Phe Arg Phe Pro Gln Glu Glu Phe Asp Gly Asn His Phe
        35   40   45
Gln Lys Val Gln Ala Ile Phe Leu Phe Tyr Glu Met Met Gln Gln Thr
    50   55   60
Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr
65   70   75   80
Leu Leu Glu Lys Phe Tyr Ile Glu Leu Phe Gln Gln Met Asn Asp Leu
                85   90   95
Glu Ala Cys Val Ile Gln Glu Val Gly Val Glu Glu Thr Pro Leu Met
            100   105   110
Asn Val Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr
        115   120   125
Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
    130   135   140

```
Arg Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Thr Asn Leu Gln Glu
145                 150                 155                 160
Ser Leu Arg Ser Lys Glu
                165
```

<210> 53
<211> 166
<212> PRT
<213> Artificial Sequence

<220>
<223> IFNalpha 14Ep04

<400> 53

```
Cys Asp Leu Pro Gln Thr His Ser Leu Gly His Arg Arg Thr Met Met
 1               5                  10                  15
Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Lys Asp
            20                  25                  30
Arg His Asp Phe Arg Phe Pro Gln Glu Glu Phe Asp Gly Asn His Phe
        35                  40                  45
Gln Lys Val Gln Ala Ile Phe Leu Phe Tyr Glu Met Met Gln Gln Thr
    50                  55                  60
Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr
65                  70                  75                  80
Leu Leu Glu Lys Phe Tyr Ile Glu Leu Phe Gln Gln Met Asn Asp Leu
                85                  90                  95
Glu Ala Cys Val Met Gln Glu Val Gly Val Glu Glu Thr Pro Leu Met
            100                 105                 110
Asn Val Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr
        115                 120                 125
Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
    130                 135                 140
Arg Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Thr Asn Leu Gln Glu
145                 150                 155                 160
Ser Leu Arg Ser Lys Glu
                165
```

<210> 54
<211> 166
<212> PRT
<213> Artificial Sequence

<220>
<223> IFNalpha 14Ep05

<400> 54

```
Cys Asp Leu Pro Gln Thr His Ser Leu Gly His Arg Arg Thr Met Met
 1               5                  10                  15
Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Lys Asp
            20                  25                  30
Arg His Asp Phe Arg Phe Pro Gln Glu Glu Phe Asp Gly Asn Gln Phe
        35                  40                  45
Gln Lys Ala Gln Ala Ile Ser Val Leu His Glu Met Met Gln Gln Thr
    50                  55                  60
Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr
65                  70                  75                  80
Leu Leu Glu Lys Phe Tyr Ile Glu Leu Phe Gln Gln Met Asn Asp Leu
                85                  90                  95
Glu Ala Cys Val Ile Gln Glu Val Gly Val Glu Glu Thr Pro Leu Met
```

```
            100                 105                 110
Asn Val Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr
        115                 120                 125
Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
    130                 135                 140
Arg Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Thr Asn Leu Gln Glu
145                 150                 155                 160
Ser Leu Arg Ser Lys Glu
                165
```

<210> 55
<211> 166
<212> PRT
<213> Artificial Sequence

<220>
<223> IFNalpha 14EF

<400> 55

```
Cys Asp Leu Pro Gln Thr His Ser Leu Gly His Arg Arg Thr Met Met
 1               5                  10                  15
Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Lys Asp
            20                  25                  30
Arg His Asp Phe Arg Phe Pro Gln Glu Glu Phe Asp Gly Asn Gln Phe
        35                  40                  45
Gln Lys Ala Gln Ala Ile Ser Val Leu His Glu Met Ile Gln Gln Thr
    50                  55                  60
Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr
65                  70                  75                  80
Leu Leu Asp Lys Phe Tyr Ile Glu Leu Phe Gln Gln Leu Asn Asp Leu
                85                  90                  95
Glu Ala Cys Val Thr Gln Glu Val Gly Val Glu Glu Ile Ala Leu Met
            100                 105                 110
Asn Glu Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr
        115                 120                 125
Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
    130                 135                 140
Arg Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Thr Asn Leu Gln Glu
145                 150                 155                 160
Ser Leu Arg Ser Lys Glu
                165
```

<210> 56
<211> 166
<212> PRT
<213> Artificial Sequence

<220>
<223> IFNalpha B9x14EP04C31

<400> 56

```
Cys Asp Leu Pro Gln Thr His Ser Leu Gly His Arg Arg Thr Met Met
 1               5                  10                  15
Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Cys Asp
            20                  25                  30
Arg His Asp Phe Arg Phe Pro Gln Glu Glu Phe Asp Gly Asn His Phe
        35                  40                  45
Gln Lys Val Gln Ala Ile Phe Leu Phe Tyr Glu Met Met Gln Gln Thr
    50                  55                  60
```

```
Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr
65                  70                  75                  80
Leu Leu Glu Lys Phe Tyr Ile Glu Leu Phe Gln Gln Met Asn Asp Leu
                85                  90                  95
Glu Ala Cys Val Met Gln Glu Val Gly Val Glu Glu Thr Pro Leu Met
            100                 105                 110
Asn Val Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr
        115                 120                 125
Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
    130                 135                 140
Arg Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Thr Asn Leu Gln Glu
145                 150                 155                 160
Ser Leu Arg Ser Lys Glu
                165
```

<210> 57
<211> 166
<212> PRT
<213> Artificial Sequence

<220>
<223> IFNalpha B9x14CH04C31

<400> 57

```
Cys Asp Leu Pro Gln Thr His Ser Leu Gly His Arg Arg Thr Met Met
 1               5                  10                  15
Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Cys Asp
            20                  25                  30
Arg His Asp Phe Arg Phe Pro Gln Glu Glu Phe Asp Gly Asn His Phe
        35                  40                  45
Gln Lys Val Gln Ala Ile Phe Leu Phe Tyr Glu Met Met Gln Gln Thr
    50                  55                  60
Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr
65                  70                  75                  80
Leu Leu Glu Lys Phe Tyr Ile Glu Leu Phe Gln Gln Met Asn Asp Leu
                85                  90                  95
Glu Ala Cys Val Met Gln Glu Val Gly Val Glu Glu Thr Pro Leu Met
            100                 105                 110
Asn Val Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr
        115                 120                 125
Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
    130                 135                 140
Arg Ala Glu Ile Met Arg Ser Phe Ser Phe Ser Thr Asn Leu Gln Glu
145                 150                 155                 160
Ser Leu Arg Ser Lys Glu
                165
```

<210> 58
<211> 166
<212> PRT
<213> Artificial Sequence

<220>
<223> IFNalpha B9x14CH04C46

<400> 58

```
Cys Asp Leu Pro Gln Thr His Ser Leu Gly His Arg Arg Thr Met Met
 1               5                  10                  15
Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Lys Asp
```

```
            20                  25                  30
Arg His Asp Phe Arg Phe Pro Gln Glu Glu Phe Asp Gly Cys His Phe
        35                  40                  45
Gln Lys Val Gln Ala Ile Phe Leu Phe Tyr Glu Met Met Gln Gln Thr
    50                  55                  60
Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr
65                  70                  75                  80
Leu Leu Glu Lys Phe Tyr Ile Glu Leu Phe Gln Gln Met Asn Asp Leu
                85                  90                  95
Glu Ala Cys Val Met Gln Glu Val Gly Val Glu Glu Thr Pro Leu Met
            100                 105                 110
Asn Val Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr
        115                 120                 125
Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
    130                 135                 140
Arg Ala Glu Ile Met Arg Ser Phe Ser Phe Ser Thr Asn Leu Gln Glu
145                 150                 155                 160
Ser Leu Arg Ser Lys Glu
                165
```

<210> 59
<211> 166
<212> PRT
<213> Artificial Sequence

<220>
<223> IFNalpha B9x14CH04C71

<400> 59

```
Cys Asp Leu Pro Gln Thr His Ser Leu Gly His Arg Arg Thr Met Met
 1               5                  10                  15
Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Lys Asp
            20                  25                  30
Arg His Asp Phe Arg Phe Pro Gln Glu Glu Phe Asp Gly Asn His Phe
        35                  40                  45
Gln Lys Val Gln Ala Ile Phe Leu Phe Tyr Glu Met Met Gln Gln Thr
    50                  55                  60
Phe Asn Leu Phe Ser Thr Cys Asp Ser Ser Ala Ala Trp Asp Glu Thr
65                  70                  75                  80
Leu Leu Glu Lys Phe Tyr Ile Glu Leu Phe Gln Gln Met Asn Asp Leu
                85                  90                  95
Glu Ala Cys Val Met Gln Glu Val Gly Val Glu Glu Thr Pro Leu Met
            100                 105                 110
Asn Val Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr
        115                 120                 125
Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
    130                 135                 140
Arg Ala Glu Ile Met Arg Ser Phe Ser Phe Ser Thr Asn Leu Gln Glu
145                 150                 155                 160
Ser Leu Arg Ser Lys Glu
                165
```

<210> 60
<211> 166
<212> PRT
<213> Artificial Sequence

<220>
<223> IFNalpha B9x14CH04C75

<400> 60
Cys Asp Leu Pro Gln Thr His Ser Leu Gly His Arg Arg Thr Met Met
 1   5   10   15
Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Lys Asp
            20   25   30
Arg His Asp Phe Arg Phe Pro Gln Glu Glu Phe Asp Gly Asn His Phe
        35   40   45
Gln Lys Val Gln Ala Ile Phe Leu Phe Tyr Glu Met Met Gln Gln Thr
    50   55   60
Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Cys Ala Trp Asp Glu Thr
65   70   75   80
Leu Leu Glu Lys Phe Tyr Ile Glu Leu Phe Gln Gln Met Asn Asp Leu
                85   90   95
Glu Ala Cys Val Met Gln Glu Val Gly Val Glu Glu Thr Pro Leu Met
            100   105   110
Asn Val Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr
        115   120   125
Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
    130   135   140
Arg Ala Glu Ile Met Arg Ser Phe Ser Phe Ser Thr Asn Leu Gln Glu
145   150   155   160
Ser Leu Arg Ser Lys Glu
                165

<210> 61
<211> 166
<212> PRT
<213> Artificial Sequence

<220>
<223> IFNalpha B9x14CH04C79

<400> 61
Cys Asp Leu Pro Gln Thr His Ser Leu Gly His Arg Arg Thr Met Met
 1   5   10   15
Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Lys Asp
            20   25   30
Arg His Asp Phe Arg Phe Pro Gln Glu Glu Phe Asp Gly Asn His Phe
        35   40   45
Gln Lys Val Gln Ala Ile Phe Leu Phe Tyr Glu Met Met Gln Gln Thr
    50   55   60
Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Cys Thr
65   70   75   80
Leu Leu Glu Lys Phe Tyr Ile Glu Leu Phe Gln Gln Met Asn Asp Leu
                85   90   95
Glu Ala Cys Val Met Gln Glu Val Gly Val Glu Glu Thr Pro Leu Met
            100   105   110
Asn Val Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr
        115   120   125
Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
    130   135   140
Arg Ala Glu Ile Met Arg Ser Phe Ser Phe Ser Thr Asn Leu Gln Glu
145   150   155   160
Ser Leu Arg Ser Lys Glu
                165

<210> 62
<211> 166

<212> PRT
<213> Artificial Sequence

<220>
<223> IFNalpha B9x14CH04C107

<400> 62
Cys Asp Leu Pro Gln Thr His Ser Leu Gly His Arg Arg Thr Met Met
 1   5   10   15
Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Lys Asp
            20   25   30
Arg His Asp Phe Arg Phe Pro Gln Glu Glu Phe Asp Gly Asn His Phe
        35   40   45
Gln Lys Val Gln Ala Ile Phe Leu Phe Tyr Glu Met Met Gln Gln Thr
    50   55   60
Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr
65   70   75   80
Leu Leu Glu Lys Phe Tyr Ile Glu Leu Phe Gln Gln Met Asn Asp Leu
                85   90   95
Glu Ala Cys Val Met Gln Glu Val Gly Val Cys Glu Thr Pro Leu Met
            100   105   110
Asn Val Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr
        115   120   125
Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
    130   135   140
Arg Ala Glu Ile Met Arg Ser Phe Ser Phe Ser Thr Asn Leu Gln Glu
145   150   155   160
Ser Leu Arg Ser Lys Glu
                165

<210> 63
<211> 166
<212> PRT
<213> Artificial Sequence

<220>
<223> IFNalpha B9x14CH04C122

<400> 63
Cys Asp Leu Pro Gln Thr His Ser Leu Gly His Arg Arg Thr Met Met
 1   5   10   15
Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Lys Asp
            20   25   30
Arg His Asp Phe Arg Phe Pro Gln Glu Glu Phe Asp Gly Asn His Phe
        35   40   45
Gln Lys Val Gln Ala Ile Phe Leu Phe Tyr Glu Met Met Gln Gln Thr
    50   55   60
Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr
65   70   75   80
Leu Leu Glu Lys Phe Tyr Ile Glu Leu Phe Gln Gln Met Asn Asp Leu
                85   90   95
Glu Ala Cys Val Met Gln Glu Val Gly Val Glu Glu Thr Pro Leu Met
            100   105   110
Asn Val Asp Ser Ile Leu Ala Val Arg Cys Tyr Phe Gln Arg Ile Thr
        115   120   125
Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
    130   135   140
Arg Ala Glu Ile Met Arg Ser Phe Ser Phe Ser Thr Asn Leu Gln Glu
145   150   155   160
Ser Leu Arg Ser Lys Glu

165

<210> 64
<211> 166
<212> PRT
<213> Artificial Sequence

<220>
<223> IFNalpha B9x14CH04C134

<400> 64
Cys Asp Leu Pro Gln Thr His Ser Leu Gly His Arg Arg Thr Met Met
 1   5   10   15
Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Lys Asp
            20   25   30
Arg His Asp Phe Arg Phe Pro Gln Glu Glu Phe Asp Gly Asn His Phe
        35   40   45
Gln Lys Val Gln Ala Ile Phe Leu Phe Tyr Glu Met Met Gln Gln Thr
    50   55   60
Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr
65   70   75   80
Leu Leu Glu Lys Phe Tyr Ile Glu Leu Phe Gln Gln Met Asn Asp Leu
                85   90   95
Glu Ala Cys Val Met Gln Glu Val Gly Val Glu Glu Thr Pro Leu Met
            100   105   110
Asn Val Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr
        115   120   125
Leu Tyr Leu Thr Glu Cys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
    130   135   140
Arg Ala Glu Ile Met Arg Ser Phe Ser Phe Ser Thr Asn Leu Gln Glu
145   150   155   160
Ser Leu Arg Ser Lys Glu
                165

<210> 65
<211> 160
<212> PRT
<213> Artificial Sequence

<220>
<223> IFNalpha B9x14Ep04(161-166

<400> 65
Cys Asp Leu Pro Gln Thr His Ser Leu Gly His Arg Arg Thr Met Met
 1   5   10   15
Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Lys Asp
            20   25   30
Arg His Asp Phe Arg Phe Pro Gln Glu Glu Phe Asp Gly Asn His Phe
        35   40   45
Gln Lys Val Gln Ala Ile Phe Leu Phe Tyr Glu Met Met Gln Gln Thr
    50   55   60
Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr
65   70   75   80
Leu Leu Glu Lys Phe Tyr Ile Glu Leu Phe Gln Gln Met Asn Asp Leu
                85   90   95
Glu Ala Cys Val Met Gln Glu Val Gly Val Glu Glu Thr Pro Leu Met
            100   105   110
Asn Val Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr
        115   120   125

```
Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
    130                 135                 140
Arg Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Thr Asn Leu Gln Glu
145                 150                 155                 160
```

<210> 66
<211> 164
<212> PRT
<213> Artificial Sequence

<220>
<223> IFNalpha B9x14Ep04(165-166

<400> 66

```
Cys Asp Leu Pro Gln Thr His Ser Leu Gly His Arg Arg Thr Met Met
 1               5                  10                  15
Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Lys Asp
            20                  25                  30
Arg His Asp Phe Arg Phe Pro Gln Glu Glu Phe Asp Gly Asn His Phe
        35                  40                  45
Gln Lys Val Gln Ala Ile Phe Leu Phe Tyr Glu Met Met Gln Gln Thr
    50                  55                  60
Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr
65                  70                  75                  80
Leu Leu Glu Lys Phe Tyr Ile Glu Leu Phe Gln Gln Met Asn Asp Leu
                85                  90                  95
Glu Ala Cys Val Met Gln Glu Val Gly Val Glu Glu Thr Pro Leu Met
            100                 105                 110
Asn Val Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr
        115                 120                 125
Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
    130                 135                 140
Arg Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Thr Asn Leu Gln Glu
145                 150                 155                 160
Ser Leu Arg Ser
```

<210> 67
<211> 159
<212> PRT
<213> Artificial Sequence

<220>
<223> IFNalpha B9x14Ep04(1-4D44*(161-166

<400> 67

```
Gln Thr His Ser Leu Gly His Arg Arg Thr Met Met Leu Leu Ala Gln
 1               5                  10                  15
Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Lys Asp Arg His Asp Phe
            20                  25                  30
Arg Phe Pro Gln Glu Glu Phe Gly Asn His Phe Gln Lys Val Gln Ala
        35                  40                  45
Ile Phe Leu Phe Tyr Glu Met Met Gln Gln Thr Phe Asn Leu Phe Ser
    50                  55                  60
Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr Leu Leu Glu Lys Phe
65                  70                  75                  80
Tyr Ile Glu Leu Phe Gln Gln Met Asn Asp Leu Glu Ala Cys Val Met
                85                  90                  95
Gln Glu Val Gly Val Glu Glu Thr Pro Leu Met Asn Val Asp Ser Ile
```

```
            100                 105                 110
Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr Leu Tyr Leu Thr Glu
        115                 120                 125
Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val Arg Ala Glu Ile Met
    130                 135                 140
Arg Ser Phe Ser Leu Ser Thr Asn Leu Gln Glu Ser Leu Arg Ser
145                 150                 155
```

<210> 68
<211> 166
<212> PRT
<213> Artificial Sequence

<220>
<223> IFNalpha B9x14CHO4NP1

<400> 68

```
Cys Asp Leu Pro Gln Thr His Ser Leu Gly His Arg Arg Thr Met Met
 1               5                  10                  15
Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Lys Asp
            20                  25                  30
Arg Gln Asp Phe Arg Phe Pro Gln Glu Glu Phe Asp Gly Asn His Phe
        35                  40                  45
Gln Lys Val Gln Ala Ile Phe Leu Phe Tyr Glu Met Met Gln Gln Thr
    50                  55                  60
Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr
65                  70                  75                  80
Leu Leu Glu Lys Phe Tyr Ile Glu Leu Phe Gln Gln Met Asn Asp Leu
                85                  90                  95
Glu Ala Cys Val Met Gln Glu Val Gly Val Glu Glu Thr Pro Leu Met
            100                 105                 110
Asn Val Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr
        115                 120                 125
Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
    130                 135                 140
Arg Ala Glu Ile Met Arg Ser Phe Ser Phe Ser Thr Asn Leu Gln Glu
145                 150                 155                 160
Ser Leu Arg Ser Lys Glu
                165
```

<210> 69
<211> 166
<212> PRT
<213> Artificial Sequence

<220>
<223> IFNalpha B9x14CHO4NP2

<400> 69

```
Cys Asp Leu Pro Gln Thr His Ser Leu Gly His Arg Arg Thr Met Met
 1               5                  10                  15
Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Lys Asp
            20                  25                  30
Arg Gln Asp Phe Arg Phe Pro Gln Glu Glu Phe Asp Gly Asn Gln Phe
        35                  40                  45
Gln Lys Val Gln Ala Ile Phe Leu Phe Tyr Glu Met Met Gln Gln Thr
    50                  55                  60
Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr
65                  70                  75                  80
```

```
Leu Leu Glu Lys Phe Tyr Ile Glu Leu Phe Gln Gln Met Asn Asp Leu
                85                  90                  95
Glu Ala Cys Val Met Gln Glu Val Gly Val Glu Glu Thr Pro Leu Met
            100                 105                 110
Asn Val Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr
        115                 120                 125
Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
    130                 135                 140
Arg Ala Glu Ile Met Arg Ser Phe Ser Phe Ser Thr Asn Leu Gln Glu
145                 150                 155                 160
Ser Leu Arg Ser Lys Glu
                165
```

<210> 70
<211> 166
<212> PRT
<213> Artificial Sequence

<220>
<223> IFNalpha B9x14CHO8

<400> 70

```
Cys Asp Leu Pro Gln Thr His Ser Leu Gly His Arg Arg Thr Met Met
 1               5                  10                  15
Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Arg Asp
            20                  25                  30
Arg His Asp Phe Arg Phe Pro Gln Glu Glu Phe Asp Gly Asn His Phe
        35                  40                  45
Gln Lys Val Gln Ala Ile Phe Leu Phe Tyr Glu Met Met Gln Gln Thr
    50                  55                  60
Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr
65                  70                  75                  80
Leu Leu Glu Lys Phe Tyr Ile Glu Leu Phe Gln Gln Met Asn Asp Leu
                85                  90                  95
Glu Ala Cys Val Met Gln Glu Val Gly Val Glu Glu Thr Pro Leu Met
            100                 105                 110
Asn Val Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr
        115                 120                 125
Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
    130                 135                 140
Arg Ala Glu Ile Met Arg Ser Phe Ser Phe Ser Thr Asn Leu Gln Glu
145                 150                 155                 160
Ser Leu Arg Ser Lys Glu
                165
```

<210> 71
<211> 166
<212> PRT
<213> Artificial Sequence

<220>
<223> IFNalpha B9x14CHO9

<400> 71

```
Cys Asp Leu Pro Gln Thr His Ser Leu Gly His Arg Arg Thr Met Met
 1               5                  10                  15
Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Lys Asp
            20                  25                  30
Arg His Asp Phe Arg Phe Pro Gln Glu Glu Phe Asp Gly Asn His Phe
```

```
        35                  40                  45
Gln Arg Val Gln Ala Ile Phe Leu Phe Tyr Glu Met Met Gln Gln Thr
    50                  55                  60
Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr
65                  70                  75                  80
Leu Leu Glu Lys Phe Tyr Ile Glu Leu Phe Gln Gln Met Asn Asp Leu
                85                  90                  95
Glu Ala Cys Val Met Gln Glu Val Gly Val Glu Glu Thr Pro Leu Met
            100                 105                 110
Asn Val Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr
        115                 120                 125
Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
    130                 135                 140
Arg Ala Glu Ile Met Arg Ser Phe Ser Phe Ser Thr Asn Leu Gln Glu
145                 150                 155                 160
Ser Leu Arg Ser Lys Glu
                165
```

<210> 72
<211> 166
<212> PRT
<213> Artificial Sequence

<220>
<223> IFNalpha B9x14CHO10

<400> 72

```
Cys Asp Leu Pro Gln Thr His Ser Leu Gly His Arg Arg Thr Met Met
 1               5                  10                  15
Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Lys Asp
            20                  25                  30
Arg His Asp Phe Arg Phe Pro Gln Glu Glu Phe Asp Gly Asn His Phe
        35                  40                  45
Gln Lys Val Gln Ala Ile Phe Leu Phe Tyr Glu Met Met Gln Gln Thr
    50                  55                  60
Phe Asn Leu Phe Ser Thr Arg Asp Ser Ser Ala Ala Trp Asp Glu Thr
65                  70                  75                  80
Leu Leu Glu Lys Phe Tyr Ile Glu Leu Phe Gln Gln Met Asn Asp Leu
                85                  90                  95
Glu Ala Cys Val Met Gln Glu Val Gly Val Glu Glu Thr Pro Leu Met
            100                 105                 110
Asn Val Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr
        115                 120                 125
Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
    130                 135                 140
Arg Ala Glu Ile Met Arg Ser Phe Ser Phe Ser Thr Asn Leu Gln Glu
145                 150                 155                 160
Ser Leu Arg Ser Lys Glu
                165
```

<210> 73
<211> 166
<212> PRT
<213> Artificial Sequence

<220>
<223> IFNalpha B9x14CHO11

<400> 73

```
Cys Asp Leu Pro Gln Thr His Ser Leu Gly His Arg Arg Thr Met Met
 1               5                  10                  15
Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Lys Asp
            20                  25                  30
Arg His Asp Phe Arg Phe Pro Gln Glu Glu Phe Asp Gly Asn His Phe
        35                  40                  45
Gln Lys Val Gln Ala Ile Phe Leu Phe Tyr Glu Met Met Gln Gln Thr
    50                  55                  60
Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr
65                  70                  75                  80
Leu Leu Glu Arg Phe Tyr Ile Glu Leu Phe Gln Gln Met Asn Asp Leu
                85                  90                  95
Glu Ala Cys Val Met Gln Glu Val Gly Val Glu Glu Thr Pro Leu Met
            100                 105                 110
Asn Val Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr
        115                 120                 125
Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
    130                 135                 140
Arg Ala Glu Ile Met Arg Ser Phe Ser Phe Ser Thr Asn Leu Gln Glu
145                 150                 155                 160
Ser Leu Arg Ser Lys Glu
                165
```

<210> 74
<211> 166
<212> PRT
<213> Artificial Sequence

<220>
<223> IFNalpha B9x14CHO12

<400> 74

```
Cys Asp Leu Pro Gln Thr His Ser Leu Gly His Arg Arg Thr Met Met
 1               5                  10                  15
Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Lys Asp
            20                  25                  30
Arg His Asp Phe Arg Phe Pro Gln Glu Glu Phe Asp Gly Asn His Phe
        35                  40                  45
Gln Lys Val Gln Ala Ile Phe Leu Phe Tyr Glu Met Met Gln Gln Thr
    50                  55                  60
Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr
65                  70                  75                  80
Leu Leu Glu Lys Phe Tyr Ile Glu Leu Phe Gln Gln Met Asn Asp Leu
                85                  90                  95
Glu Ala Cys Val Met Gln Glu Val Gly Val Glu Glu Thr Pro Leu Met
            100                 105                 110
Asn Val Asp Ser Ile Leu Ala Val Arg Arg Tyr Phe Gln Arg Ile Thr
        115                 120                 125
Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
    130                 135                 140
Arg Ala Glu Ile Met Arg Ser Phe Ser Phe Ser Thr Asn Leu Gln Glu
145                 150                 155                 160
Ser Leu Arg Ser Lys Glu
                165
```

<210> 75
<211> 166
<212> PRT
<213> Artificial Sequence

<220>
<223> IFNalpha B9x14CHO13

<400> 75
Cys Asp Leu Pro Gln Thr His Ser Leu Gly His Arg Arg Thr Met Met
 1   5   10   15
Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Lys Asp
            20   25   30
Arg His Asp Phe Arg Phe Pro Gln Glu Glu Phe Asp Gly Asn His Phe
        35   40   45
Gln Lys Val Gln Ala Ile Phe Leu Phe Tyr Glu Met Met Gln Gln Thr
    50   55   60
Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr
65   70   75   80
Leu Leu Glu Lys Phe Tyr Ile Glu Leu Phe Gln Gln Met Asn Asp Leu
                85   90   95
Glu Ala Cys Val Met Gln Glu Val Gly Val Glu Glu Thr Pro Leu Met
            100   105   110
Asn Val Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr
        115   120   125
Leu Tyr Leu Thr Glu Arg Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
    130   135   140
Arg Ala Glu Ile Met Arg Ser Phe Ser Phe Ser Thr Asn Leu Gln Glu
145   150   155   160
Ser Leu Arg Ser Lys Glu
                165

<210> 76
<211> 166
<212> PRT
<213> Artificial Sequence

<220>
<223> IFNalpha B9x14CHO14

<400> 76
Cys Asp Leu Pro Gln Thr His Ser Leu Gly His Arg Arg Thr Met Met
 1   5   10   15
Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Lys Asp
            20   25   30
Arg His Asp Phe Arg Phe Pro Gln Glu Glu Phe Asp Gly Asn His Phe
        35   40   45
Gln Lys Val Gln Ala Ile Phe Leu Phe Tyr Glu Met Met Gln Gln Thr
    50   55   60
Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr
65   70   75   80
Leu Leu Glu Lys Phe Tyr Ile Glu Leu Phe Gln Gln Met Asn Asp Leu
                85   90   95
Glu Ala Cys Val Met Gln Glu Val Gly Val Glu Glu Thr Pro Leu Met
            100   105   110
Asn Val Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr
        115   120   125
Leu Tyr Leu Thr Glu Lys Arg Tyr Ser Pro Cys Ala Trp Glu Val Val
    130   135   140
Arg Ala Glu Ile Met Arg Ser Phe Ser Phe Ser Thr Asn Leu Gln Glu
145   150   155   160
Ser Leu Arg Ser Lys Glu
                165

<210> 77
<211> 166
<212> PRT
<213> Artificial Sequence

<220>
<223> IFNalpha B9x14CHO15

<400> 77
Cys Asp Leu Pro Gln Thr His Ser Leu Gly His Arg Arg Thr Met Met
 1   5   10   15
Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Lys Asp
            20   25   30
Arg His Asp Phe Arg Phe Pro Gln Glu Glu Phe Asp Gly Asn His Phe
        35   40   45
Gln Lys Val Gln Ala Ile Phe Leu Phe Tyr Glu Met Met Gln Gln Thr
    50   55   60
Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr
65   70   75   80
Leu Leu Glu Lys Phe Tyr Ile Glu Leu Phe Gln Gln Met Asn Asp Leu
                85   90   95
Glu Ala Cys Val Met Gln Glu Val Gly Val Glu Glu Thr Pro Leu Met
            100   105   110
Asn Val Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr
        115   120   125
Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
    130   135   140
Arg Ala Glu Ile Met Arg Ser Phe Ser Phe Ser Thr Asn Leu Gln Glu
145   150   155   160
Ser Leu Arg Ser Arg Glu
                165

<210> 78
<211> 166
<212> PRT
<213> Artificial Sequence

<220>
<223> IFNalpha B9x14CHO16

<400> 78
Cys Asp Leu Pro Gln Thr His Ser Leu Gly His Arg Arg Thr Met Met
 1   5   10   15
Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Lys Asp
            20   25   30
Arg His Asp Phe Arg Phe Pro Gln Glu Glu Phe Asp Gly Asn His Phe
        35   40   45
Gln Lys Val Gln Ala Ile Phe Leu Phe Tyr Glu Met Met Gln Gln Thr
    50   55   60
Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr
65   70   75   80
Leu Leu Glu Lys Phe Tyr Ile Glu Leu Phe Gln Gln Met Asn Asp Leu
                85   90   95
Glu Ala Cys Val Met Gln Glu Val Gly Val Glu Glu Thr Pro Leu Met
            100   105   110
Asn Val Asp Ser Ile Leu Ala Val Arg Arg Tyr Phe Gln Arg Ile Thr
        115   120   125
Leu Tyr Leu Thr Glu Lys Arg Tyr Ser Pro Cys Ala Trp Glu Val Val
    130   135   140

```
Arg Ala Glu Ile Met Arg Ser Phe Ser Phe Ser Thr Asn Leu Gln Glu
145                 150                 155                 160
Ser Leu Arg Ser Lys Glu
                165
```

<210> 79
<211> 166
<212> PRT
<213> Artificial Sequence

<220>
<223> IFNalpha B9x14CHO17

<400> 79

```
Cys Asp Leu Pro Gln Thr His Ser Leu Gly His Arg Arg Thr Met Met
 1               5                  10                  15
Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Arg Asp
            20                  25                  30
Arg His Asp Phe Arg Phe Pro Gln Glu Glu Phe Asp Gly Asn His Phe
        35                  40                  45
Gln Lys Val Gln Ala Ile Phe Leu Phe Tyr Glu Met Met Gln Gln Thr
    50                  55                  60
Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr
65                  70                  75                  80
Leu Leu Glu Lys Phe Tyr Ile Glu Leu Phe Gln Gln Met Asn Asp Leu
                85                  90                  95
Glu Ala Cys Val Met Gln Glu Val Gly Val Glu Glu Thr Pro Leu Met
            100                 105                 110
Asn Val Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr
        115                 120                 125
Leu Tyr Leu Thr Glu Lys Arg Tyr Ser Pro Cys Ala Trp Glu Val Val
    130                 135                 140
Arg Ala Glu Ile Met Arg Ser Phe Ser Phe Ser Thr Asn Leu Gln Glu
145                 150                 155                 160
Ser Leu Arg Ser Lys Glu
                165
```

<210> 80
<211> 166
<212> PRT
<213> Artificial Sequence

<220>
<223> IFNalpha B9x14CHO18

<400> 80

```
Cys Asp Leu Pro Gln Thr His Ser Leu Gly His Arg Arg Thr Met Met
 1               5                  10                  15
Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Arg Asp
            20                  25                  30
Arg His Asp Phe Arg Phe Pro Gln Glu Glu Phe Asp Gly Asn His Phe
        35                  40                  45
Gln Lys Val Gln Ala Ile Phe Leu Phe Tyr Glu Met Met Gln Gln Thr
    50                  55                  60
Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr
65                  70                  75                  80
Leu Leu Glu Lys Phe Tyr Ile Glu Leu Phe Gln Gln Met Asn Asp Leu
                85                  90                  95
Glu Ala Cys Val Met Gln Glu Val Gly Val Glu Glu Thr Pro Leu Met
```

```
            100                 105                 110
Asn Val Asp Ser Ile Leu Ala Val Arg Arg Tyr Phe Gln Arg Ile Thr
        115                 120                 125
Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
    130                 135                 140
Arg Ala Glu Ile Met Arg Ser Phe Ser Phe Ser Thr Asn Leu Gln Glu
145                 150                 155                 160
Ser Leu Arg Ser Lys Glu
                165
```

<210> 81
<211> 166
<212> PRT
<213> Artificial Sequence

<220>
<223> IFNalpha B9x14CHO18NP2

<400> 81

```
Cys Asp Leu Pro Gln Thr His Ser Leu Gly His Arg Arg Thr Met Met
 1               5                  10                  15
Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Arg Asp
            20                  25                  30
Arg Gln Asp Phe Arg Phe Pro Gln Glu Glu Phe Asp Gly Asn Gln Phe
        35                  40                  45
Gln Lys Val Gln Ala Ile Phe Leu Phe Tyr Glu Met Met Gln Gln Thr
    50                  55                  60
Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr
65                  70                  75                  80
Leu Leu Glu Lys Phe Tyr Ile Glu Leu Phe Gln Gln Met Asn Asp Leu
                85                  90                  95
Glu Ala Cys Val Met Gln Glu Val Gly Val Glu Glu Thr Pro Leu Met
            100                 105                 110
Asn Val Asp Ser Ile Leu Ala Val Arg Arg Tyr Phe Gln Arg Ile Thr
        115                 120                 125
Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
    130                 135                 140
Arg Ala Glu Ile Met Arg Ser Phe Ser Phe Ser Thr Asn Leu Gln Glu
145                 150                 155                 160
Ser Leu Arg Ser Lys Glu
                165
```

<210> 82
<211> 164
<212> PRT
<213> Artificial Sequence

<220>
<223> IFNalpha B9x14CHO18NP2(165-166

<400> 82

```
Cys Asp Leu Pro Gln Thr His Ser Leu Gly His Arg Arg Thr Met Met
 1               5                  10                  15
Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Arg Asp
            20                  25                  30
Arg Gln Asp Phe Arg Phe Pro Gln Glu Glu Phe Asp Gly Asn Gln Phe
        35                  40                  45
Gln Lys Val Gln Ala Ile Phe Leu Phe Tyr Glu Met Met Gln Gln Thr
    50                  55                  60
```

```
Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr
65                  70                  75                  80
Leu Leu Glu Lys Phe Tyr Ile Glu Leu Phe Gln Gln Met Asn Asp Leu
                85                  90                  95
Glu Ala Cys Val Met Gln Glu Val Gly Val Glu Glu Thr Pro Leu Met
            100                 105                 110
Asn Val Asp Ser Ile Leu Ala Val Arg Arg Tyr Phe Gln Arg Ile Thr
        115                 120                 125
Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
    130                 135                 140
Arg Ala Glu Ile Met Arg Ser Phe Ser Phe Ser Thr Asn Leu Gln Glu
145                 150                 155                 160
Ser Leu Arg Ser
```

<210> 83
<211> 166
<212> PRT
<213> Artificial Sequence

<220>
<223> IFNalpha B9x25CHO1

<400> 83

```
Cys Asp Leu Pro Gln Thr His Ser Leu Ser Asn Arg Arg Thr Leu Met
 1               5                  10                  15
Leu Met Ala Gln Met Arg Arg Ile Ser Pro Phe Ser Cys Leu Lys Asp
            20                  25                  30
Arg His Asp Phe Gly Phe Pro Glu Glu Glu Phe Asp Gly His His Phe
        35                  40                  45
Gln Lys Val Gln Ala Ile Phe Leu Leu Tyr Glu Leu Ile Gln Gln Thr
    50                  55                  60
Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr
65                  70                  75                  80
Leu Leu Glu Lys Phe Tyr Ile Glu Leu Phe Gln Gln Met Asn Asn Leu
                85                  90                  95
Glu Ala Cys Val Ile Gln Glu Val Gly Val Glu Glu Ile Ala Leu Met
            100                 105                 110
Asn Val Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Arg Arg Ile Thr
        115                 120                 125
Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
    130                 135                 140
Arg Ala Glu Ile Met Arg Ser Phe Ser Phe Ser Thr Asn Leu Gln Lys
145                 150                 155                 160
Arg Leu Arg Arg Lys Glu
                165
```

<210> 84
<211> 166
<212> PRT
<213> Artificial Sequence

<220>
<223> IFNalpha B9x25CHO2

<400> 84

```
Cys Asp Leu Pro Gln Thr His Ser Leu Ser Asn Arg Arg Thr Leu Met
 1               5                  10                  15
Leu Met Ala Gln Met Arg Arg Ile Ser Pro Phe Ser Cys Leu Lys Asp
```

```
            20                  25                  30
Arg His Asp Phe Gly Phe Pro Glu Glu Glu Phe Asp Gly His His Phe
        35                  40                  45
Gln Lys Val Gln Ala Ile Phe Leu Leu Tyr Glu Leu Ile Gln Gln Thr
    50                  55                  60
Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr
65                  70                  75                  80
Leu Leu Glu Lys Phe Tyr Ile Glu Leu Phe Gln Gln Met Asn Asn Leu
                85                  90                  95
Glu Ala Cys Val Ile Gln Glu Val Gly Val Glu Glu Ile Ala Leu Met
            100                 105                 110
Asn Val Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Arg Arg Ile Thr
        115                 120                 125
Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
    130                 135                 140
Arg Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Thr Asn Leu Gln Glu
145                 150                 155                 160
Ser Leu Arg Ser Lys Glu
                165
```

<210> 85
<211> 166
<212> PRT
<213> Artificial Sequence

<220>
<223> IFNalpha B9x25CHO3

<400> 85

```
Cys Asp Leu Pro Gln Thr His Ser Leu Ser Asn Arg Arg Thr Leu Met
 1               5                  10                  15
Leu Met Ala Gln Met Arg Arg Ile Ser Pro Phe Ser Cys Leu Lys Asp
            20                  25                  30
Arg His Asp Phe Gly Phe Pro Glu Glu Glu Phe Asp Gly His His Phe
        35                  40                  45
Gln Lys Val Gln Ala Ile Phe Leu Leu Tyr Glu Leu Ile Gln Gln Thr
    50                  55                  60
Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr
65                  70                  75                  80
Leu Leu Glu Lys Phe Tyr Ile Glu Leu Phe Gln Gln Met Asn Asn Leu
                85                  90                  95
Glu Ala Cys Val Ile Gln Glu Val Gly Val Glu Glu Ile Ala Leu Met
            100                 105                 110
Asn Val Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Arg Arg Ile Thr
        115                 120                 125
Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
    130                 135                 140
Arg Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Thr Asn Leu Gln Glu
145                 150                 155                 160
Cys Leu Arg Ser Lys Glu
                165
```

<210> 86
<211> 166
<212> PRT
<213> Artificial Sequence

<220>
<223> IFNalpha B9x25CHO4

<400> 86
Cys Asp Leu Pro Gln Thr His Ser Leu Ser Asn Arg Arg Thr Leu Met
 1   5   10   15
Leu Met Ala Gln Met Arg Arg Ile Ser Pro Phe Ser Cys Leu Lys Asp
            20   25   30
Arg His Asp Phe Gly Phe Pro Glu Glu Glu Phe Asp Gly His His Phe
        35   40   45
Gln Lys Val Gln Ala Ile Phe Leu Leu Tyr Glu Leu Ile Gln Gln Thr
    50   55   60
Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr
65   70   75   80
Leu Leu Glu Lys Phe Tyr Ile Glu Leu Phe Gln Gln Met Asn Asn Leu
                85   90   95
Glu Ala Cys Val Ile Gln Glu Val Gly Val Glu Glu Ile Ala Leu Met
            100   105   110
Asn Val Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Arg Arg Ile Thr
        115   120   125
Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
    130   135   140
Arg Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Thr Asn Leu Gln Glu
145   150   155   160
Ser Leu Arg Cys Lys Glu
                165

<210> 87
<211> 166
<212> PRT
<213> Artificial Sequence

<220>
<223> IFNalpha B9x25Ep01

<400> 87
Cys Asp Leu Pro Gln Thr His Ser Leu Ser Asn Arg Arg Thr Leu Met
 1   5   10   15
Leu Met Ala Gln Met Arg Arg Ile Ser Pro Phe Ser Cys Leu Lys Asp
            20   25   30
Arg His Asp Phe Gly Phe Pro Glu Glu Glu Phe Asp Gly His Gln Phe
        35   40   45
Gln Lys Thr Gln Ala Ile Ser Val Leu His Glu Leu Ile Gln Gln Thr
    50   55   60
Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr
65   70   75   80
Leu Leu Glu Lys Phe Tyr Ile Glu Leu Phe Gln Gln Met Asn Asn Leu
                85   90   95
Glu Ala Cys Val Ile Gln Glu Val Gly Val Glu Glu Ile Ala Leu Met
            100   105   110
Asn Val Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Arg Arg Ile Thr
        115   120   125
Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
    130   135   140
Arg Ala Glu Ile Met Arg Ser Phe Ser Phe Ser Thr Asn Leu Gln Lys
145   150   155   160
Arg Leu Arg Arg Lys Glu
                165

<210> 88
<211> 166

<212> PRT
<213> Artificial Sequence

<220>
<223> IFNalpha B9x25Ep02

<400> 88
Cys Asp Leu Pro Gln Thr His Ser Leu Ser Asn Arg Arg Thr Leu Met
 1   5   10   15
Ile Met Ala Gln Met Gly Arg Ile Ser Pro Phe Ser Cys Leu Lys Asp
            20   25   30
Arg His Asp Phe Gly Phe Pro Glu Glu Glu Phe Asp Gly His Gln Phe
        35   40   45
Gln Lys Thr Gln Ala Ile Ser Val Leu His Glu Leu Ile Gln Gln Thr
    50   55   60
Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr
65   70   75   80
Leu Leu Glu Lys Phe Tyr Ile Glu Leu Phe Gln Gln Met Asn Asn Leu
                85   90   95
Glu Ala Cys Val Ile Gln Glu Val Gly Val Glu Glu Ile Ala Leu Met
            100   105   110
Asn Val Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Arg Arg Ile Thr
        115   120   125
Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
    130   135   140
Arg Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Thr Asn Leu Gln Glu
145   150   155   160
Ser Leu Arg Ser Lys Glu
                165

<210> 89
<211> 166
<212> PRT
<213> Artificial Sequence

<220>
<223> IFNalpha B9x25Ep03

<400> 89
Cys Asn Leu Ser Gln Thr His Ser Leu Asn Asn Arg Arg Thr Leu Met
 1   5   10   15
Leu Met Ala Gln Met Arg Arg Ile Ser Pro Phe Ser Cys Leu Lys Asp
            20   25   30
Arg His Asp Phe Gly Phe Pro Glu Glu Glu Phe Asp Gly His Gln Phe
        35   40   45
Gln Lys Thr Gln Ala Ile Ser Val Leu His Glu Leu Ile Gln Gln Thr
    50   55   60
Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr
65   70   75   80
Leu Leu Glu Lys Phe Tyr Ile Glu Leu Phe Gln Gln Met Asn Asn Leu
                85   90   95
Glu Ala Cys Val Ile Gln Glu Val Gly Val Glu Glu Ile Ala Leu Met
            100   105   110
Asn Val Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Arg Arg Ile Thr
        115   120   125
Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
    130   135   140
Arg Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Thr Asn Leu Gln Glu
145   150   155   160
Ser Leu Arg Ser Lys Glu

165

<210> 90
<211> 166
<212> PRT
<213> Artificial Sequence

<220>
<223> IFNalpha B9x25Ep04

<400> 90
Cys Asp Leu Pro Gln Thr His Ser Leu Ser Asn Arg Arg Thr Leu Met
 1   5   10   15
Leu Met Ala Gln Met Arg Arg Ile Ser Pro Phe Ser Cys Leu Lys Asp
            20   25   30
Arg His Asp Phe Gly Phe Pro Glu Glu Glu Phe Asp Gly His Gln Phe
        35   40   45
Gln Lys Thr Gln Ala Ile Ser Val Leu His Glu Met Ile Gln Gln Thr
    50   55   60
Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr
65   70   75   80
Leu Leu Glu Lys Phe Tyr Ile Glu Leu Phe Gln Gln Met Asn Asn Leu
                85   90   95
Glu Ala Cys Val Ile Gln Glu Val Gly Val Glu Glu Ile Ala Leu Met
            100   105   110
Asn Val Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Arg Arg Ile Thr
        115   120   125
Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
    130   135   140
Arg Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Thr Asn Leu Gln Glu
145   150   155   160
Ser Leu Arg Ser Lys Glu
                165

<210> 91
<211> 166
<212> PRT
<213> Artificial Sequence

<220>
<223> IFNalpha B9x25Ep05

<400> 91
Cys Asp Leu Pro Gln Thr His Ser Leu Ser Asn Arg Arg Thr Leu Met
 1   5   10   15
Leu Met Ala Gln Met Arg Arg Ile Ser Pro Phe Ser Cys Leu Lys Asp
            20   25   30
Arg His Asp Phe Gly Phe Pro Glu Glu Glu Phe Asp Gly His Gln Phe
        35   40   45
Gln Lys Thr Gln Ala Ile Ser Val Leu His Glu Leu Ile Gln Gln Thr
    50   55   60
Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr
65   70   75   80
Leu Leu Glu Lys Phe Tyr Ile Glu Leu Phe Gln Gln Met Asn Asp Leu
                85   90   95
Glu Ala Cys Val Ile Gln Glu Val Gly Val Glu Glu Ile Ala Leu Met
            100   105   110
Asn Val Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Arg Arg Ile Thr
        115   120   125

```
Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
    130                 135                 140
Arg Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Thr Asn Leu Gln Glu
145                 150                 155                 160
Ser Leu Arg Ser Lys Glu
                165
```

<210> 92
<211> 166
<212> PRT
<213> Artificial Sequence

<220>
<223> IFNalpha B9x25Ep06

<400> 92

```
Cys Asp Leu Pro Gln Thr His Ser Leu Ser Asn Arg Arg Thr Leu Met
 1               5                  10                  15
Leu Met Ala Gln Met Arg Arg Ile Ser Pro Phe Ser Cys Leu Lys Asp
            20                  25                  30
Arg His Asp Phe Gly Phe Pro Glu Glu Glu Phe Asp Gly His Gln Phe
        35                  40                  45
Gln Lys Thr Gln Ala Ile Ser Val Leu His Glu Leu Ile Gln Gln Thr
    50                  55                  60
Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr
65                  70                  75                  80
Leu Leu Asp Lys Phe Tyr Ile Glu Leu Phe Gln Gln Leu Asn Asp Leu
                85                  90                  95
Glu Ala Cys Val Thr Gln Glu Val Gly Val Glu Glu Ile Ala Leu Met
            100                 105                 110
Asn Glu Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Arg Arg Ile Thr
        115                 120                 125
Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
    130                 135                 140
Arg Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Thr Asn Leu Gln Glu
145                 150                 155                 160
Ser Leu Arg Ser Lys Glu
                165
```

<210> 93
<211> 166
<212> PRT
<213> Artificial Sequence

<220>
<223> IFNalpha B9x25Ep07

<400> 93

```
Cys Asp Leu Pro Gln Thr His Ser Leu Ser Asn Arg Arg Thr Leu Met
 1               5                  10                  15
Leu Met Ala Gln Met Arg Arg Ile Ser Pro Phe Ser Cys Leu Lys Asp
            20                  25                  30
Arg His Asp Phe Gly Phe Pro Glu Glu Glu Phe Asp Gly His Gln Phe
        35                  40                  45
Gln Lys Thr Gln Ala Ile Ser Val Leu His Glu Leu Ile Gln Gln Thr
    50                  55                  60
Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr
65                  70                  75                  80
Leu Leu Glu Lys Phe Tyr Ile Glu Leu Phe Gln Gln Met Asn Asn Leu
```

```
                85                  90                  95
Glu Ala Cys Val Ile Gln Glu Val Gly Val Glu Glu Ile Ala Leu Met
            100                 105                 110
Asn Val Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr
        115                 120                 125
Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
    130                 135                 140
Arg Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Thr Asn Leu Gln Glu
145                 150                 155                 160
Ser Leu Arg Ser Lys Glu
                165
```

<210> 94
<211> 166
<212> PRT
<213> Artificial Sequence

<220>
<223> IFNalpha B9x25Ep08

<400> 94

```
Cys Asp Leu Pro Gln Thr His Ser Leu Ser Asn Arg Arg Thr Leu Met
 1               5                  10                  15
Leu Met Ala Gln Met Arg Arg Ile Ser Pro Phe Ser Cys Leu Lys Asp
            20                  25                  30
Arg His Asp Phe Gly Phe Pro Glu Glu Glu Phe Asp Gly His Gln Phe
        35                  40                  45
Gln Lys Thr Gln Ala Ile Ser Val Leu His Glu Leu Ile Gln Gln Thr
    50                  55                  60
Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr
65                  70                  75                  80
Leu Leu Glu Lys Phe Tyr Ile Glu Leu Phe Gln Gln Met Asn Asn Leu
                85                  90                  95
Glu Ala Cys Val Ile Gln Glu Val Gly Val Glu Glu Ile Ala Leu Met
            100                 105                 110
Asn Val Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Arg Arg Ile Thr
        115                 120                 125
Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
    130                 135                 140
Arg Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Thr Asn Leu Gln Glu
145                 150                 155                 160
Ser Leu Arg Ser Lys Glu
                165
```

<210> 95
<211> 166
<212> PRT
<213> Artificial Sequence

<220>
<223> IFNalpha B9x25Ep10

<400> 95

```
Cys Asp Leu Pro Gln Thr His Ser Leu Ser Asn Arg Arg Thr Leu Met
 1               5                  10                  15
Ile Met Ala Gln Met Gly Arg Ile Ser Pro Phe Ser Cys Leu Lys Asp
            20                  25                  30
Arg His Asp Phe Gly Phe Pro Glu Glu Glu Phe Asp Gly His His Phe
        35                  40                  45
```

```
Gln Lys Val Gln Ala Ile Phe Leu Leu Tyr Glu Leu Ile Gln Gln Thr
    50                  55                  60
Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr
65                  70                  75                  80
Leu Leu Glu Lys Phe Tyr Ile Glu Leu Phe Gln Gln Met Asn Asn Leu
                85                  90                  95
Glu Ala Cys Val Ile Gln Glu Val Gly Val Glu Glu Ile Ala Leu Met
            100                 105                 110
Asn Val Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Arg Arg Ile Thr
        115                 120                 125
Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
    130                 135                 140
Arg Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Thr Asn Leu Gln Glu
145                 150                 155                 160
Ser Leu Arg Ser Lys Glu
                165
```

<210> 96
<211> 166
<212> PRT
<213> Artificial Sequence

<220>
<223> IFNalpha B9x25Ep11

<400> 96

```
Cys Asn Leu Ser Gln Thr His Ser Leu Asn Asn Arg Arg Thr Leu Met
 1               5                  10                  15
Leu Met Ala Gln Met Arg Arg Ile Ser Pro Phe Ser Cys Leu Lys Asp
            20                  25                  30
Arg His Asp Phe Gly Phe Pro Glu Glu Glu Phe Asp Gly His His Phe
        35                  40                  45
Gln Lys Val Gln Ala Ile Phe Leu Leu Tyr Glu Leu Ile Gln Gln Thr
    50                  55                  60
Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr
65                  70                  75                  80
Leu Leu Glu Lys Phe Tyr Ile Glu Leu Phe Gln Gln Met Asn Asn Leu
                85                  90                  95
Glu Ala Cys Val Ile Gln Glu Val Gly Val Glu Glu Ile Ala Leu Met
            100                 105                 110
Asn Val Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Arg Arg Ile Thr
        115                 120                 125
Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
    130                 135                 140
Arg Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Thr Asn Leu Gln Glu
145                 150                 155                 160
Ser Leu Arg Ser Lys Glu
                165
```

<210> 97
<211> 166
<212> PRT
<213> Artificial Sequence

<220>
<223> IFNalpha B9x25Ep12

<400> 97

```
Cys Asp Leu Pro Gln Thr His Ser Leu Ser Asn Arg Arg Thr Leu Met
```

```
 1               5                  10                  15
Leu Met Ala Gln Met Arg Arg Ile Ser Pro Phe Ser Cys Leu Lys Asp
            20                  25                  30
Arg His Asp Phe Gly Phe Pro Glu Glu Glu Phe Asp Gly His His Phe
        35                  40                  45
Gln Lys Val Gln Ala Ile Phe Leu Leu Tyr Glu Leu Ile Gln Gln Thr
    50                  55                  60
Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr
65                  70                  75                  80
Leu Leu Glu Lys Phe Tyr Ile Glu Leu Phe Gln Gln Met Asn Asn Leu
                85                  90                  95
Glu Ala Cys Val Ile Gln Glu Val Gly Val Glu Glu Ile Ala Leu Met
            100                 105                 110
Asn Val Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr
        115                 120                 125
Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
    130                 135                 140
Arg Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Thr Asn Leu Gln Glu
145                 150                 155                 160
Ser Leu Arg Ser Lys Glu
                165
```

<210> 98
<211> 166
<212> PRT
<213> Artificial Sequence

<220>
<223> IFNalpha B9x25Ep13

<400> 98

```
Cys Asp Leu Pro Gln Thr His Ser Leu Ser Asn Arg Arg Thr Leu Met
 1               5                  10                  15
Ile Met Ala Gln Met Gly Arg Ile Ser Pro Phe Ser Cys Leu Lys Asp
            20                  25                  30
Arg His Asp Phe Gly Phe Pro Glu Glu Glu Phe Asp Gly His His Phe
        35                  40                  45
Gln Lys Val Gln Ala Ile Phe Leu Leu Tyr Glu Leu Ile Gln Gln Thr
    50                  55                  60
Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr
65                  70                  75                  80
Leu Leu Glu Lys Phe Tyr Ile Glu Leu Phe Gln Gln Met Asn Asn Leu
                85                  90                  95
Glu Ala Cys Val Ile Gln Glu Val Gly Val Glu Glu Ile Ala Leu Met
            100                 105                 110
Asn Val Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr
        115                 120                 125
Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
    130                 135                 140
Arg Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Thr Asn Leu Gln Glu
145                 150                 155                 160
Ser Leu Arg Ser Lys Glu
                165
```

<210> 99
<211> 166
<212> PRT
<213> Artificial Sequence

<220>
<223> IFNalpha B9x25Ep14

<400> 99
Cys Asn Leu Ser Gln Thr His Ser Leu Asn Asn Arg Arg Thr Leu Met
 1   5   10   15
Leu Met Ala Gln Met Arg Arg Ile Ser Pro Phe Ser Cys Leu Lys Asp
            20   25   30
Arg His Asp Phe Gly Phe Pro Glu Glu Glu Phe Asp Gly His His Phe
        35   40   45
Gln Lys Val Gln Ala Ile Phe Leu Leu Tyr Glu Leu Ile Gln Gln Thr
    50   55   60
Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr
65   70   75   80
Leu Leu Glu Lys Phe Tyr Ile Glu Leu Phe Gln Gln Met Asn Asn Leu
                85   90   95
Glu Ala Cys Val Ile Gln Glu Val Gly Val Glu Glu Ile Ala Leu Met
            100   105   110
Asn Val Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr
        115   120   125
Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
    130   135   140
Arg Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Thr Asn Leu Gln Glu
145   150   155   160
Ser Leu Arg Ser Lys Glu
                165

<210> 100
<211> 166
<212> PRT
<213> Artificial Sequence

<220>
<223> IFNalpha B9x25Ep15

<400> 100
Cys Asp Leu Pro Gln Thr His Ser Leu Ser Asn Arg Arg Thr Leu Met
 1   5   10   15
Leu Met Ala Gln Met Arg Arg Ile Ser Pro Phe Ser Cys Leu Lys Asp
            20   25   30
Arg His Asp Phe Gly Phe Pro Glu Glu Glu Phe Asp Gly His Gln Phe
        35   40   45
Gln Lys Thr Gln Ala Ile Ser Val Leu His Glu Leu Ile Gln Gln Thr
    50   55   60
Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr
65   70   75   80
Leu Leu Glu Lys Phe Tyr Ile Glu Leu Phe Gln Gln Met Asn Asn Leu
                85   90   95
Glu Ala Cys Val Ile Gln Glu Val Gly Val Glu Glu Ile Ala Leu Met
            100   105   110
Asn Val Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Arg Arg Ile Thr
        115   120   125
Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
    130   135   140
Arg Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Thr Asn Leu Gln Glu
145   150   155   160
Ser Leu Arg Ser Lys Glu
                165

<210> 101
<211> 166
<212> PRT
<213> Artificial Sequence

<220>
<223> IFNalpha B9x25Ep16

<400> 101
Cys Asp Leu Pro Gln Thr His Ser Leu Ser Asn Arg Arg Thr Leu Met
 1   5   10   15
Ile Met Ala Gln Met Gly Arg Ile Ser Pro Phe Ser Cys Leu Lys Asp
            20   25   30
Arg His Asp Phe Gly Phe Pro Glu Glu Glu Phe Asp Gly His Gln Phe
        35   40   45
Gln Lys Thr Gln Ala Ile Ser Val Leu His Glu Leu Ile Gln Gln Thr
    50   55   60
Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr
65   70   75   80
Leu Leu Glu Lys Phe Tyr Ile Glu Leu Phe Gln Gln Met Asn Asn Leu
                85   90   95
Glu Ala Cys Val Ile Gln Glu Val Gly Val Glu Glu Ile Ala Leu Met
            100   105   110
Asn Val Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr
        115   120   125
Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
    130   135   140
Arg Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Thr Asn Leu Gln Glu
145   150   155   160
Ser Leu Arg Ser Lys Glu
                165

<210> 102
<211> 166
<212> PRT
<213> Artificial Sequence

<220>
<223> IFNalpha B9x25Ep17

<400> 102
Cys Asn Leu Ser Gln Thr His Ser Leu Asn Asn Arg Arg Thr Leu Met
 1   5   10   15
Leu Met Ala Gln Met Arg Arg Ile Ser Pro Phe Ser Cys Leu Lys Asp
            20   25   30
Arg His Asp Phe Gly Phe Pro Glu Glu Glu Phe Asp Gly His Gln Phe
        35   40   45
Gln Lys Thr Gln Ala Ile Ser Val Leu His Glu Leu Ile Gln Gln Thr
    50   55   60
Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr
65   70   75   80
Leu Leu Glu Lys Phe Tyr Ile Glu Leu Phe Gln Gln Met Asn Asn Leu
                85   90   95
Glu Ala Cys Val Ile Gln Glu Val Gly Val Glu Glu Ile Ala Leu Met
            100   105   110
Asn Val Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr
        115   120   125
Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
    130   135   140
Arg Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Thr Asn Leu Gln Glu

145 150 155 160
Ser Leu Arg Ser Lys Glu
165

<210> 103
<211> 166
<212> PRT
<213> Artificial Sequence

<220>
<223> IFNalpha B9x25EF1

<400> 103
Cys Asp Leu Pro Gln Thr His Ser Leu Ser Asn Arg Arg Thr Leu Met
1 5 10 15
Ile Met Ala Gln Met Gly Arg Ile Ser Pro Phe Ser Cys Leu Lys Asp
20 25 30
Arg His Asp Phe Gly Phe Pro Glu Glu Glu Phe Asp Gly His Gln Phe
35 40 45
Gln Lys Thr Gln Ala Ile Ser Val Leu His Glu Met Ile Gln Gln Thr
50 55 60
Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr
65 70 75 80
Leu Leu Asp Lys Phe Tyr Ile Glu Leu Phe Gln Gln Leu Asn Asp Leu
85 90 95
Glu Ala Cys Val Thr Gln Glu Val Gly Val Glu Glu Ile Ala Leu Met
100 105 110
Asn Glu Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr
115 120 125
Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
130 135 140
Arg Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Thr Asn Leu Gln Glu
145 150 155 160
Ser Leu Arg Ser Lys Glu
165

<210> 104
<211> 166
<212> PRT
<213> Artificial Sequence

<220>
<223> IFNalpha B9x25EF2

<400> 104
Cys Asn Leu Ser Gln Thr His Ser Leu Asn Asn Arg Arg Thr Leu Met
1 5 10 15
Leu Met Ala Gln Met Arg Arg Ile Ser Pro Phe Ser Cys Leu Lys Asp
20 25 30
Arg His Asp Phe Gly Phe Pro Glu Glu Glu Phe Asp Gly His Gln Phe
35 40 45
Gln Lys Thr Gln Ala Ile Ser Val Leu His Glu Met Ile Gln Gln Thr
50 55 60
Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr
65 70 75 80
Leu Leu Asp Lys Phe Tyr Ile Glu Leu Phe Gln Gln Leu Asn Asp Leu
85 90 95
Glu Ala Cys Val Thr Gln Glu Val Gly Val Glu Glu Ile Ala Leu Met
100 105 110

```
Asn Glu Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr
        115                 120                 125
Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
    130                 135                 140
Arg Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Thr Asn Leu Gln Glu
145                 150                 155                 160
Ser Leu Arg Ser Lys Glu
                165
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